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EDITORIAL : SOME HIGHLIGHTS.

The State Perspectives and the 1972—73 Annual Plan.

Monetary factors continue to be to the fore, fluctuating exchange rates, mounting Central and State deficits and the continuing price inflation.

Exchange Parities :

The United State's decision to suspend convertibility of the dollar into gold and the imposition of the 10 per cent surcharge on industrial imports have led to the revaluation or floating of the exchange rates of all other developed countries. The foreign trade of the State and the country faces uncertainty. Business houses, dealers and banks live from day to day and cannot plan ahead. From this point of view the Government's announced decision to maintain the rupee-dollar parity does introduce one small element of stability in Indo-U. S. Trade. However, there has been in effect a devaluation of the rupee vis-a-vis other currencies of Europe and Japan and this devalued rate varies with the floating exchanges of U. K., Germany and Japan with whom our foreign trade is much larger. Further, despite the stable parity with the United States, at least 15 per cent of our exports will now become non-competitive with the imposition of the additional 10 per cent of the import duty. With countries with revalued exchange rates, our exports receive a boost, but at a time of increasing imports of certain scarce industrial material such as steel, cotton and chemicals, our import costs are mounting. Under these conditions, it is an open question as to whether we should have shown our hand with regard to our exchange rate parities so quickly and so early. In favour of the quick and early decision of the Government that the rupee will maintain its parity with dollar is the short term advantage of providing some certainty to our foreign trade movement. There is also the long term position that India shares with all developing countries in favour of a stable system of exchange rates, which system must ensure international liquidity and expanding and favourable terms of trade

for the developing countries. But given the intimate links between exchange parities, international liquidity, foreign trade volume and terms and national growth rates, there is a case for all options for the country on both the question of exchange parities and the international monetary system being kept open. From this point of view, the current decision to maintain the dollar-rupee parity without change may be just the first act in a drama which has still to be played out on other stages than those of the State and the country.

Deficit Financing :

The problem of Central and State deficits continues to be a worrisome factor. The overall central deficit for the current year could be variously computed to range from Rs. 385 crores to Rs. 420 crores and the trend in State deficits is an increasing one. As at March 1971, the outstanding loans from the States amounted to Rs. 6342 crores, Tamil Nadu being one of the lower debtor States at Rs. 350 crores. The larger question raised by this abnormal deficit financing is whether the annual plan for the current year and that being prepared for the next year can be executed with the approved or required allocations or whether they will have to be considerably trimmed to meet the deficit. This question must be faced and answered in the next two months. On the other side, there is a case for financial discipline in the case of States who are chronic debtors and who are not making the required, leave alone maximum, effort to raise the needed revenue. From this point of view, Uttar Pradesh which raises 3 per cent of the State's income in taxes, Haryana which raises 3.9 per cent and Bihar 2.6 per cent are simply not making the effort. Tamil Nadu among the States makes the second most impressive effort to raise the needed revenues. It collects 5.1 per cent of its income in State taxes, being surpassed only by Maharashtra which raises 5.7 per cent. Tamil Nadu is also second in raising 1.4 per cent of its agricultural incomes—in agricultural taxes, Assam being the first with 1.6 per cent, while most States raise between 0.2 to 0.6 per cent as revenue from agriculture. Tamil Nadu can do even better in raising resources from the rural sector. One such move is the decision to raise the power rates for farmers from 9 paise to 12 paise per unit. The other side of the coin is the

re-scheduling and cancellation of State debts. There is no case for a general re-scheduling and cancellation of debts for all States as that will simply be a premium to financial indiscipline. There is a strong case for debt re-scheduling and cancellation in the case of States like Tamil Nadu which are making every effort to raise resources. In fact a sliding scale commensurate with the State effort can be devised for this seemingly intractable problem. To leave the debt situation and deficit financing without early remedial action is simply a further fillip to inflationary pressure.

Prices and Wage Goods :

The price situation continues to be a matter of serious concern. The Reserve Bank of India Weekly Indices of Consumer and Commodity prices show a continuous rise. In the first four months of 1971, we had a rise of 3.6 per cent in commodity prices and of 5.6 per cent in the fiscal year 1970-71. In the four months' period, April-July, food prices have risen by 5 per cent and so have the prices of cloth and more recently industrial raw materials. In August, the rise in food articles, raw materials and manufactured goods prices were 2.6, 2.2 and 0.5 respectively. The price rises in Tamil Nadu were referred to in the last issue of the Bulletin (No. 8). Recent reports from Vellore, Vaniambadi, Arni and other areas show a 20 to 30 paise rise in the price per litre of rice. Against the government fixed price of Rs. 27.36 per 57 kilo bag, the market price ranges from Rs. 46 to Rs. 51/. While other price rises can be explained in terms of absolute or relative shortages. the rise in the State price of rice is more serious. This increase at a time when there is a record rice production of 53.03 lakh tonnes and of all good foodgrains where the total production exceeds 70.7 lakh tonnes, can only be explained by bottlenecks in distribution. There is need for the release of government stocks, strengthening and expanding of fair price and co-operative shops and a slow down in the continuous increase in money supply. An increasing quantity of money chasing fewer and fewer goods—cotton, steel, oil seeds, etc., together with the increasing costs of imported industrial raw materials and machinery add to the cost push and price rise trends. The impact of the price rise on the poor majority in the State is serious and is one which widens the rich-

poor gap. There is need here for a national policy to supply the essential wage-goods, rice/wheat, pulses, cloth and kerosene to the urban and rural poor at low subsidised prices through a distribution network which ensures that these goods reach the poor. The State demonstrated in 1967 and 1968 in the case of rice that this can be done. It was only the heavy cost burden on the State Government that prevented the continuation and extension of the programme. Such a programme can be run on an All-India level with Central funds diverted from projects with long gestation periods.

Income and Employment Generation :

This programme of distribution of low priced wage goods has to be developed alongside of the equally urgent State programme of income generation and employment creation. The continuing and expanding problem of rural under-employment and unemployment in the State as indicated in the weekly indices of Agricultural man-hours worked and in the records of employment exchanges calls for an inter-locking programme of income generation and employment stimulation. The record of the commercial banks in the State, particularly the nationalised sector, in promoting the first objective of income generation through increased credit to small farmers and small industry represent a satisfying start. With 6 per cent of the country's deposits and 10 per cent of total credit, banks in Tamil Nadu occupy the third place among States, in this drive for income generation. This is however only a start in servicing the rural sector more adequately where the coverage of the average branch is 50,000 persons compared to the norm of 5 to 6 thousand in the West and 11 thousand in Iran. There is also the need for more active mobilisation by these institutions of the growing rural resources in order to further service the income generating activities of the small and marginal farmers and the small industrialist. In this regard the recommendations of the Pai Committee that banks should not only provide the farmer with credit but co-ordinate the provision of the whole package of technological inputs that he needs is important and raises two questions for this State. There is the problem of the overheads involved and the problem of actually reaching the small farmer. On the

employment creation side, the various crash schemes financed by the Centre are still not effectively and speedily being implemented in the State. The rural public works programme is in some districts slowed down by disputes between the district engineer and the panchayat president as to the daily quantum of work and related wage rates for the unemployed workers working on the projects. The crash programme for the educated unemployed through the Youth Corps and other projects is still in the pre-operation stage. The National Council for Applied Economic Research (NCAER) employment proposals would add to the existing centrally financed programmes of Rs. 75 crores, a material contents programme of Rs. 25 crores. The Council suggests that to counteract the inflationary impact of these programmes, there should be re-programming of plan projects, collecting some part of the unearned income from the beneficiaries of development works and some pruning of non-plan expenditures. These proposals have two applications to Tamil Nadu. There is need to expand the crash employment generation programme in scope. There is also a strong case for reducing the power and irrigation subsidies and collecting some part of the unearned incomes from the large land holdings which benefit from irrigation, energisation and the new technological package.

The 1972—73 Plan :

All these pilot and partial efforts at income generation and employment creation need to be brought together into a comprehensive programme in the thinking, work and preparation now under way with regard to the State's Annual Plan for 1972—1973. In that Plan, in addition to continuing the projects from the current year, and starting or completing the feasibility and engineering studies for the new project in the Plan that the Minister of Industries has been negotiating with the Centre and with the business firms in the countries that he visited, the first step should be taken to integrate the income generation and employment creation projects initiated in the current year and develop for the State a comprehensive scheme of land and water development as proposed by the Union Planning Commission and into which the present pilot schemes can be incorporated. The grand design of the scheme involves :

(a) ceilings on individual land ownership;

(b) effective redistribution of land that emerges as surplus over the ceiling, and

(c) consolidation of holdings.

For our State, the Annual Plan can start with the Ceilings Acts of 1961 and 1971 as well as the Tenancy Act of 1969 which is now to be extended from Tiruchirapalli, Tirunelveli and Madurai to the entire State. The legislative frame is available both for land ceilings and for providing security of ownership to tenants so that they can be motivated to invest in the new technology. What is needed is the effective, strict and honest enforcement of laws and statutes. Personal, political, family, communal and caste considerations and favours must not be allowed to operate and create loopholes in the legislative intentions. What the State's Annual Plan should provide is the second and third component—land distribution based on need of the landless agricultural labourer and the tenant farmer and a carefully developed scientific programme of consolidation. There may be in some cases need for land parcelisation in order to meet a small farmer's distinctive needs for growing paddy, vegetables and coconuts and grazing his cattle in separate holdings. Hence the consolidation programme must be related to the individual farmer's needs and follow flexible patterns. Both land distribution and consolidation if started on the right lines and if the human factors of favouritism, nepotism and red-tape are kept under control can be income and employment generating. From this point of view it may be wise to start this programme with one or two (blocks) pilot projects in each of our 14 districts during the coming year.

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Agricultural Development.

Foodgrains :

The foodgrains production prospects for the State of 73 lakh tonnes for the current year as against 71 lakh tonnes last year reported in the last issue of the Bulletin (No. 8) remain valid

with even prospects of some surpassing of the estimate. This is despite unseasonal rains in the latter weeks of August which affected the Kuruvai and Samba crops and cultivation. Budalur, Thirukkattupalli, Adirampattinam and Nagapattinam, and the Thanjavur area generally have had record rain-falls. Between June to February two rice crops are grown in 27 lakh acres, the early high-yielding 160 day variety followed by the 150 day photo-sensitive variety. The high-yielding IR-8 is grown over 6.6 lakh acres, yielding double (6000 kg per acre) as an early crop compared to the late kharif cultivation. IR-20 which has greater consumer preference in the State might become the second late kharif crop, providing an optimum combination of IR-8 for early kharif and IR-20 for winter production. With this continuous increase of food production over the last 5 years, the Food Minister's forecast that after next December there will be no further food imports is not surprising. This is a long cry from the annual import of 10 to 12 million tonnes of wheat so recently as 6 years ago.

Jute/Paddy Rotation:

The single paddy crop economy which characterises Thanjavur and other districts in the State is likely to experience a much needed change with the introduction of jute. Jute can be grown in February and March after the Samba paddy harvest in the districts of Thanjavur, Tiruchirapalli, Madurai, Tirunelveli and Chingleput. It has been computed that the net return to the farmer from this jute paddy crop pattern would be of the order of Rs. 2,000/- per acre. With the disruption of jute supply from East Bengal, the international and internal market is now ready for a rapid expansion of jute production. The long term implications for Tamil Nadu's jute crop when conditions return to normal will depend on the country's production meeting and expanding the international demand while Tamil Nadu jute will be meeting the expanding domestic demand. It is now necessary for the farmers and the State Government to set up the needed retting tanks, etc., with the help of the Centre and train the necessary staff for the State at the Calcutta Institute of Jute Research. Thanjavur's sole and somewhat unviable dependence on paddy can thus be corrected.

Prospects for Oilseeds and Pulses:

With the serious short-fall expected in groundnut production involving a decline from 62 lakh tonnes in the current season to around 55 lakh tonnes due to draught conditions in Maharashtra, Mysore and Andhra, Tamil Nadu's groundnut production for the next season must be rapidly expanded both under the irrigated and rainfed areas. The replacement of other crops by groundnuts over 300,000 acres plus the 40,000 acres extension through double cropping in the Coimbatore area needs to be repeated in other districts. For this expanded area, the improved seeds (T.M.V. 7 and POL 7) along with fertilizers consisting of wood ash and seasoned ash mixed with cattle manure will increase yields rapidly. The seller's market in groundnut in the coming season is an opportunity to use the groundnut package scheme to extend and improve the State's total out of this oilseed. Another oil seed with great production potential is safflower as well as sun-flower which grow not only as a dry crop but also in saline soils and as a border crop to cotton. Salem and Palladam in Coimbatore have shown that the crop yield is 150 kg, per acre and that it can be extended to the dry areas of Dharmapuri, Ramanathapuram, Madurai and Tirunelveli as a further income supplement to the dry farmers. Sunflower can also be grown in irrigated areas as a short 90 day crop with about five times the per acre yield of that grown in dry areas. Similarly there could be a rapid increase in pulses production, which is so urgently needed in the State. Four new high-yielding varieties have now been released by Pusa. The mung will mature in 65 days, yield 10 quintals per hectare and can be multiple and rotation cropped. The arahar varieties will mature in five months. All four are suited for dry farming and can generate new or increased incomes for the dry farmer as well as meet the nutrition requirements of the low income group. Further prospects for improving these and other dry crops in the State are enhanced by the recent establishment of the Glass House Station at the State Agricultural University. At the station, dry crop research will be undertaken and intensified under controlled conditions.

Cotton expansion :

Tamil Nadu can also play a decisive part in the supply of the scarce industrial raw material—cotton. As against the plan target of 80 lakh bales, there has been a progressive decline in the cotton crop produced from 59.8 lakh bales in 1969-70 to 56.5 lakh bales in 1970-71 and an estimated 52.53 lakh bales for the current year. The textile mills need about 58 lakh bales for their manufacture of yarn and fabrics and the deficit of 7 to 8 lakh bales will have to be imported. Actually the textile mills have a consumption capacity of 70 lakh bales for which 72 lakh bales of cotton production is required. India is the second largest producer of cotton with the lowest per acre production of 120 lbs. against an Egyptian and African per acre production of 500 lbs. The mill crisis referred to in the sixth issue of the Bulletin is related to our declining cotton production. It is high time for the Government to turn its attention to this depressed area and supplement the efforts of the Indian Cotton Mills Federation. Such a start is now under way. Under the three-year Rs. 15 crore Central programme, the Coimbatore District under irrigated areas and Tirunelveli under rainfed conditions will be the subject each year of an extended acreage of cotton cultivation along with the use of pure seed, controlled use of fertilizers and plant protection measures. In Coimbatore an annual increase of 20,000 irrigated hectares and in Tirunelveli a further 20,000 dry hectares will be intensively cultivated, with a view to doubling the yield per acre. Even so that will be only half the African per acre yield. Through this Central Scheme and the three State sponsored package programmes, the Tamil Nadu yield per acre which is the highest in the country at 20 quintals can be increased by half as much.

A State Seed Farm :

For all these high yielding and multiple cropping programmes the supply of pure and quality seeds has become crucial. The State Farm Corporation has now become the major enterprise in this area with its nine farms spread between cotton seeds and seeds for wheat, jute, oilseeds, pulses and more recently, paddy. Its high yielding cotton seed farms at Raichur, Suratgar and Hissar are functioning effectively. A similar Central State Farm in Tamil Nadu is overdue. The 11,000 acre Chengam site in the North

Arcot district is well equipped to be the State project. With an assured water supply through 150 wells and seasonal rains it will have 180 per cent efficiency and can exploit 16,000 acres under a system of double cropping. As a mechanised farm, it would also provide employment to 2,000 workers and help in the development of agro-based industries in North Arcot. It would be a much needed supplement to the small seed farms in Coimbatore. The State Government now needs to move rapidly to equip the State with this important and much needed facility.

The meaning of high production of rubber, tea and coffee :

The remarkable increase in the production of rubber, tea and coffee referred to in the sixth issue of the Bulletin raises important short and long term problems concerning their internal and external markets. Coffee production is at a maximum at over one lakh tonnes compared to 75,000 tonnes four years ago. While the increased tea production will be absorbed by increased demand internally and internationally, the rubber market is stagnant and the coffee surplus a fact. The short term measures for rubber relate essentially to action which will stimulate the rubber goods industry, primarily through promoting industrial peace in that sector. The coffee surplus calls for an internal promotion campaign. There is no basis for the view that there is a glut in these crops from a long term perspective. To talk of a rubber glut at a time when there are no truck tyres in the market as from September and when an import indent of 60,000 tyres has had to be placed does not make much sense. As the Madras Rubber Factory settles its labour problems and the Calcutta firms solve their labour unrest and power shortage, the demand for rubber will out-run the supply position. In fact the rubber goods industry is a sleeping giant which in getting anywhere near the Plan target will call for rubber imports and synthetics. In the case of coffee there is a glut of the present low quality coffee. What is needed internally and even more in the external market is coffee of the quality grown in Brazil, Venezuela, Colombia and Central America. It is therefore necessary now that coffee plantation owners embark on a long term programme of growing high quality coffee, develop co-operative processing factories for small farmers and vary their cultivation to cover other similar crops like cocoa.

Pests, Post-harvest facilities and Water:

Tapioca in the State grown mainly in Salem and Dharmapuri is an industrial cash crop, unlike Kerala where it is a food crop. The sago industry around Salem draws up to 70 per cent of its raw material from local tapioca production in 60,000 acres. Hence the pest which is now attacking this important commercial crop has serious agro-industrial consequences in the State. In addition to plant protection and pesticide measures to meet the immediate danger, the State Farm, the Agricultural University and the Salem Research Station should help in developing pest resistant seeds. Another important initiative is the development of warehousing with specialised structures for the storage of individual seeds, cane, jaggery, etc. These and other post-harvest facilities are urgent in a country where the annual foodgrain losses from the absence of such facilities amount to the total annual food production of Tamil Nadu. Discussion is currently underway once more regarding the State's underground water resources. It is true that in theory only 1/17th of utilizable ground water is being exploited. Pudukottai, Thanjavur, Cuddalore, the belt between Gadilam and Pennar and Coleroon and Vennar are all held to be rich in untapped under-ground water. Further there is lopsided water development in the State, North Arcot alone having about half of the wells of the entire State. The State Plan for sinking 3 lakhs wells in seven years at a cost of Rs. 368.5 crores could start with work in the two most needy districts of Dharmapuri and Ramanathapuram.

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Industrial Pointers

Neyveli Crisis:

The Neyveli Industrial Complex functioning at below 50 per cent capacity and with accumulated losses of over Rs. 32 crores is in a bad way. All production units record declining trends. The lignite off-take has fallen from 4.28 million tonnes in 1969-70 to 3.3 million tonnes in 1970-71, while a minimum annual production of 6 million tonnes is needed. Urea production has fallen from 88 thousand tonnes to 69 thousand tonnes. Power supply

has declined from 1950 million units to 1501 million units. Similar declines are recorded in the briquetting plant and fertilizers production. Its products, laco, urea, and power are being sold at double the price that was originally fixed—Rs. 16.50 instead of Rs. 8. Rs. 1,100/- instead of Rs. 570/- respectively. To propose a second mine cut under these conditions seems somewhat unconvincing, The basic causes of the Neyveli malaise are known and need not be debated. They include insufficient and out-dated mining machinery, bureaucratic delays in ordering fresh machinery, poor management, absence of ancillary industries and disturbed labour relations. What is urgently needed is an economic evaluation of the complex and speedy action on the recommended measures for making this crucial enterprise in the State viable.

The product mix for Salem Steel :

This is also the time to review and make fresh decisions on the product mix and content of Salem Steel in light of the latest NCAER forecast of the steel demand for 1975 and 1980. The justification, if justification was needed, for the Salem, Hospet and Visakhapatnam plants emerges from the revised and lowered 1975 demand forecasts of 7.9 million tonnes for mild steel, 567 thousand tonnes for alloy and special steels and 1.4 million tonnes of pig-iron as against the 1969-70 off-take of 5.5 million tonnes, 305 thousand tonnes and one million tonnes, respectively. The 1980 demand forecasts are 13.6 million tonnes, 1.06 million tonnes and 2.2 million tonnes, which contain no provision for an export surplus because of the non-productive cost structure of the product mix, according to the Council. The justification provided by these forecasts for Salem Steel and the other two plants apart, the basis for this fourth revised forecast in eight years is probably the current, sluggish industrial growth rate of under five per cent. This is an uncertain basis for any forecasting. The latest revised estimates might be way off the mark if current efforts spearheaded by the Prime Minister and a whole host of institutions to double the rate of industrial growth are successful. Even if these efforts to accelerate industrial growth are only partially successful, the surplus can be exported. The assumption as to the high cost non-competitive nature of Indian steel is not borne out by facts as steel costs are much higher in Western Europe, U.S., and Japan.

But for the Salem Steel Plant, the report has one special relevance, the question of its product mix which needs urgent attention. The present plan for Salem to specialise in producing two lakh tonnes of low alloy steel needs to be reviewed in light of the supply and demand forecasts for alloy and special steels. Durgapur and the many private steel plants are specialising in and planing to expand this particular product, One possibility is for Salem to switch to producing two to three lakh tonnes of ingots and mild steel and roll them into rounds, channels and squares. A careful market survey is needed for the three southern plants which will concentrate particularly on a detailed survey of steel demand in the southern region with a view to deciding the product mix. This can be done by a small group of steel producers and consumers drawn from the public and private sector. It is on the basis of the recommendation of this group as to the product mix that the technical consultants now deciding on the machinery to be installed at Salem can finalise their report. This will delay by six months the completion of the market and engineering studies on this Rs. 200 crore project. Past issues of the Bulletin (No. 2 and No. 4) have urged speed in the start of this project. But the current difficulties of Neyveli and other public sector undertakings are sufficient warnings to demand this delay in order to lay a firm and realistic basis for the plant and equally for the ancillary industries that will grow up around it.

Cement and handloom problems :

One problem area for the State is the Cement Industry which is working effectively and to capacity and where the demand for the product from the north and the east is constantly expanding. The problem for the industry arises from the bottleneck that has developed in moving its stocks. The floods in the east, the losses suffered by the railways in their stores and equipment in the north and the east, the poor operational scheduling and the turn around and use of wagons and a small decline in local demand, all these have reduced the marketing of the product. Added to this transport bottleneck is the falling export demand from the neighbouring countries of Ceylon and Indonesia. A similar situation has faced the Sugar Industry in the State. Immediate steps should be taken to ensure rapid and safe transport of these two products and find new

export outlets. But given the poor and unreliable infrastructure, the general question of the location of industries and the need to plan capacity on the basis of local demands are raised. This is one of the criteria that the Salem Steel product mix study must take into account. Another sector facing a rather sharp fall in export demand is the handloom industry which during the first six months of this year has exported Rs. 6 crores less than during the first six months of 1970 primarily due to the decline in the export demand for silks—mulberry, tassar, sarees and scarves. Some improvement in quality and intensified promotion can make up this lag. Also the demand for cotton handloom items, bleedings, shirtings, carpets and dhurries, is increasing fast. A long term programme of a partial diversion within the handloom industry into these lines might be assisted by the Government and the Co-operative Society.

The Textile Mills Problems

The textile mills crisis referred to in Issue No. 7 of the Bulletin continues to demand action both on a short and long term basis. For the present and on the basis of the functioning of the five mills that it took over last year, the State Government is investigating through the Somasundaram Committee, the possibility of taking over a further six closed mills. It has now received recommendations on the modalities for restarting two mills—Janardana and Pankaja—and the Tamil Nadu Corporation will be acting on the recommendation. The major long term issue is modernisation of the mills and the liquidation of their past liabilities. On both these issues, the National Textile Corporation should be much more forthcoming to help the State Government in implementing the recommended programme. Modernisation includes diversification and the call of the Chairman of the Lakshmi Mills during its annual general meeting for the development not only of composite yarn and fabric production but also for the industry to enter the whole area of man made fibres is timely. While our mills rely for 90 per cent of their product on cotton, in other countries man made fibres have replaced cotton by over 50 per cent. Here is an area for the Government and private sector to work hand in hand for the diversification of the industry. Further as part of this long term programme, the

6-point scheme for modernising export-oriented textile mills announced by the Government is a move in the right direction. The International Finance Corporation which will administer this programme of concessional low interest loans might study and recommend its extension as appropriate to the modernisation of the textile industry as a whole and not only its export component. Meanwhile the controversy as to whether the sick mills are sick or healthy and whether their situation can be corrected overnight if they are permitted to be merged with running concerns is somewhat pointless. Such a merger programme within the country's legislative policies is one of the many lines of action for reviving the mills which are not so far gone that they should be liquidated. In the case of the textile industry crisis as in other crises an either or imperative may be good oratory but is hardly a realistic and effective course of action.

Small Industry :

The Small Industries Exhibition in the State was well organised and will act as a demonstration for further expansion of the sector. Industrial estates and the growth of ancillary industries around a major production complex emerge as the immediate means of expanding the Small Industries Sector. The need for such developments in the Salem-Neyveli and Salem Steel complexes have already been referred to. The establishment of the Welding Institute as an ancillary to the Bharat Heavy Electricals at Tiruchirapalli is a case in point. The Institute will use indigenous materials and develop the service data needed for consumables. It will be the first unit to adopt electro-slag welding in the manufacture of drums. Similarly the Plastic Resins and Chemicals at Sahupuram in Tirunelveli district will feed ancillary industries needed for its product—polyvenyl chloride. The plant set up at a cost of Rs. 9 crores is fully automated and is ready to to go into operation, using chlorium from the neighbouring Dhrangadhra Chemical Works and naphtha which Indian Oil Corporation will supply. Unlike ancillary industrial development, the State has a good start with regard to industrial estates which need to be increased in number and located in backward regions. For the organic development of this small sector, a rapid and smooth supply of its raw materials requirement, both imported

and indigenous, their supply at reasonable prices and an announced policy and criteria with regard to the credit eligibility of the sector are needed.

Life Insurance Corporation and Development :

The Life Insurance Corporation's annual report provides useful data as to its investment portfolio in rural electrification, housing development, water supply and drainage schemes, agriculture, small scale industries, the private sector industry and Government loans. Seventy-five per cent of its investments are in the public sector and 15 percent in the private. This latter which amounts to Rs. 251 crores needs further expansion without the Corporation acquiring a controlling interest in the firms. There is a delicate balance to be struck between ensuring public good and interest and allowing the private sector its freedom and flexibility on which its efficiency and innovativeness depend. The LIC Investment Portfolio is a major development resource and its wise and flexible exploitation should rest on the criteria of the short and long interest of the State and the Country. If its enforced contributions to government loans could be reduced, it could play a more important role in the development of small industry, agriculture and the private sector generally.

Industrial Gaps :

One of the industrial gaps in the State is in the chemical and dye fields. The Minister of Industries having obtained the necessary letters of intent from the Central Government, has during his travel to Europe, United States and Japan successfully negotiated technical collaboration arrangement for seven priority projects in the State—sodium hydro-sulphite, chromic sulphate, potassium chlorate, soda ash, ammonium chloride, tyres and a piston rings. Fourteen other industrial prospects have been explored during this extremely fruitful industries category, which make them a priority. In concluding the collaboration arrangements, particular attention will need to be paid by the Government and industry as to the use of indigenous rather than imported technology in order to avoid the past error of importing technology even when it is and could be available in the country. This issue is related to the important objective of the autonomous develop-

ment of the country's science and technology and industry. In this regard the minister's statement that the Tamil Nadu Government would itself now finance industrial research is a much needed break through. The development of the new hydraulic vibration machine by the I I T, Guindy with indigenous materials and know how is illustrative of the potential strength of indigenous technology. The machine costs Rs. 20,000, is being used by the Thumba Space Research Station and will be used by our industries for testing machine structures, vehicle suspension, consolidating loose materials etc. The high cost of an imported vibration machine has todate prevented its use in our industries. The commercial production of the I I T prototype is now being undertaken as a private company activity in the city. The list of winners of the Invention Promotion Board on the Independence Day rightly include four members of the I I T, Guindy, three from the C L R I, Guindy, two from the Karaikudy Electro Chemical Research Institute and one from the Tiruchi Bharat Heavy Electricals.

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Science and Education.

Industrial Research :

The State Government's decision to sponsor industrial research is as pointed out earlier, a practical and much needed development. The Mafatlal Committee of Scientists and Industrialists in its report diagnosed the low level of utilization of industrial research by industrial firms. It points out that this is due to the absence of an integrated policy on the part of Government,—and Industry it should be added. On the one hand as long as there is no policy that encourages large industrial houses to use their research findings, there will be little incentive either for undertaking such research or using the results because of various restrictions on the expansion of firms. This applies to research undertaken either in the industry or the national laboratories. The report points to the multitudinous verbal endorsements for encouraging indigenous technology but the policies which can

give effect to such developments are yet to be formulated and accepted. The President of the Republic has at Bombay once more emphasized the need to encourage indigenous technology and research in every way and has called for a revision of our facile reliance on and resort to foreign technology. The Chief Ministers of Maharashtra and Andhra Pradesh recently called for a recasting of the present methodology of industrial development in favour, as one of them put it, of " a proper choice and balance of technologies appropriate to our national endowment and financial capacity on the one hand and our social needs and compulsions on the other." In this connection the Simco Chairman's annual report refers to a small but significant practical pointer. Even with a limited allocation of Rs. 7 lakhs, the firm has established a research and development cell which has already developed indigenous critical components which were previously imported for combination meters. More industries need to follow suit along similar lines and not simply wait for government modification of the policies on monopolies and restricted practices. The Mafatlal committee's recommendations for the joint working of Government public and private sector in order to identify long range problems of national importance and provide the finances to the appropriate national laboratory or industry to undertake the required research will ensure research results and technology moving speedily into production. They will forge and strengthen the transmission belt between science, technology and production.

A Research Policy :

This recommendation for the development of Indian technology and research must be studied alongside of the recommendations of the Sarkar Committee which was set up to study the functioning and future of the CSIR and scientific research generally. Its main recommendation has been accepted by the Government and a National Commission of Science and Technology has been established to formulate and co-ordinate science policy in the country, assist in the preparation of plans for the governmental research agencies, CSIR, ICAR, ICMR, DAE and the Defence Research Institutes, establish priorities for research and integrate the science research plan with the five year plan.

The Commission with a full time chairman will function under the Department of Science and Technology in its major task of identifying priorities for research and development efforts and approving Science and Technology plans for the various organisations. *In the Government communique establishing the new* Commission the terms of reference need clarification on one matter. It states that the Commission will "prepare Science and Technology plans for various organisations". Unless it is proposed for the Commission to duplicate the staff expertise of the 5 Government research bodies, which will be wasteful, uneconomic and ineffective, the responsibility for preparing plans should rest with the research organisations. The Commission should assist, approve, co-ordinate and integrate these plans with the Five Year Plan. In fact the Science Plans emanating from the Commission will be a counterpart of the socio-economic plan and be a part of the over all Five Year Plan. This important decision to establish a research policy in the country, co-ordinate Science and Technology research and integrate it with the National Plan has been Unesco's reiterated recommendation to the Government of India during the last six years. Almost all other countries in Europe and Africa, Asia and America have such an overall co-ordinating and priority setting science body, In Western Europe and America over 60 percent of all R and D is in the private sector and yet national science co-ordinating bodies have been established and function effectively. In India over 95 percent of all R and D is in the governmental or Government financed sectors and yet we are a late starter in developing a national science policy. With the establishment of the National Commission, Indian Science and Technology can develop a policy, become a part of the planned development of the country and act as its motor force and instrument.

Restructuring CSIR :

The other recommendations of the Sarkar Committee relate to the CSIR. They are aimed at decentralising scientific research decisions to the Director of the national laboratory, integrating the work of the laboratories with the needs of the public and private sector industries and linking certain laboratories with their substantive departments. Thus for instance it is recommended

that the Institute of Experimental Medicine should be operated by ICMR, the National Botanical Gardens by the Botanical Survey of India, the Electronics Institute by the Department of Electronics, the Medical Plant Institute by ICAR, the Industrial and Science Museums by the National Council of Science Education and the commodity libraries on Glass and Ceramics, Leather and Food Technology as joint-research institutions with industry. Important recommendations are made for selective and restrictive use of foreign technology which should all pass through the National Research and Development Corporation and not be the subject of direct transmission between a business firm and a foreign company. The Corporation is to have the responsibility for ensuring the commercial exploitation of the research and development work of the national laboratories. These far reaching and timely recommendations are under study by the Minister of of Planning, Science and Technology and the newly appointed Director-General of the CSIR, Dr. Nayudamma. Dr. Nayudamma leaves the directorship of CLRI in Madras after developing the Leather Research Laboratory into a model of integrated research arising out of the needs of the leather industry. He carries with him all good wishes from the business and research community for inaugurating the CSIR research procedures and policies recommended by the Committee.

A Science & Technology Foundation :

Another important proposal under study by the Union Minister of Education is for the establishment of a Science and Technology Foundation of India to meet the increasing demand in the country for technical literature. The Foundation will be an autonomous body of the Ministry concerned with science, technology, agriculture and the business organisations concerned with printing and publishing. The Foundation will plan a Science and Technology Publications Programme, offer consultancy and information services to authors and publishers and publish itself selected manuscripts. It recommends long overdue revisions of science syllabi of the Universities and a balanced programme of science publications by Indian authors and a regulated and rational flow of books from other countries. This last recommendation needs reflection and further discussion in order to

reconcile the obligation to encourage in every way national talent, authors and publishers and the International (Unesco) Committee to do nothing to hamper the free flow of knowledge; on which science lives, and the peace and well being of both this country and all other countries rest.

A Science Work Centre :

Tamil Nadu will now have a Science Work Centre. The Association for the Promotion of Science education has established the centre which should spark the movement for the reform of science teaching programmes in primary and secondary schools. It will also help in the inservice and preservice training of science teachers and in the production of modern science teaching materials and equipment with local materials.

Examination Reform :

The examination reform programme for the Country has gained a further adherent. The Indian Institute of Technology, Powai, Bombay, which Unesco with the Government helped to develop over a ten year period, had decided to reduce the weight and frequency of written examination. For the present examinations have been reduced by 50 per cent and eventually they will be reduced by 80 per cent. Instead there will be a scheme of continuous assignments in the form of viva, quiz, problem-oriented self study and group discussions. The teaching will follow the individual learning path of each student, replacing the mass lecture system. This experiment also will be followed by educators, planners and administrators in the country who are concerned with improving the quality of the education system.

Aiding the educationally underprivileged :

The State Government is planning to construct 40 hostels for Harijan and backward class students so that they can avail themselves of the concessional educational scheme offered to them. Currently these concessions require that the student live in a Government run or recognised hostel. With the present dearth of student residences in the State, these students who suffered educational discrimination in the past are not able to take

advantage of the present concessional facilities. When the hostels are constructed, the educational authorities must arrange for a proper mix of students from different social and cultural backgrounds in all student residence, both existing and new.

Youth and Development :

The 23rd World Conference of Leaders of Boy Scouts held at Tokyo devoted its session to developing a programme for the participation of youth, particularly scout youth, in the Second Development Decade. There was a general concensus that the growing scout movement must adapt its well tried techniques of education and games to the demands of development particularly of the under developed countries. Such a programme with an important training component is to centre around a four point action call, of awareness, participation, preparation and contribution. The Conference also adopted an ecology programme. The conservation problem is to be one of the major themes in scouting particularly in the developed countries. For this purpose it was suggested that there should be established an International Conservation Week to be observed by scouts throughout the world. Five African and Arab countries were admitted to the world scout movement, increasing the total world membership to 12 million scouts. This Youth Programme for the Second Development Decade was closely paralleled by one of the projects adopted by the Indian National Commission for Co-operation with Unesco at a recent Delhi meeting and entitled "Reaching Out to Youth" as a suggestion for Unesco's programme for 1973-74.

Technical Training Guidelines :

A four day All India Consultation held in Madras on the Role of the Church of South India in the area of technical and vocational training as its contribution to the emerging new society arrived at important conclusions for action. The meeting engaged in a diagnosis of the political, economic, social, cultural and moral factors at work in the new society and adopted a series of guidelines which are aimed at helping the Church and the Christian Community to make an effective and selfless contribution to the new society of justice and development. It suggested a three fold focus of training for wage employment, self employment and

supplementary employment related to the needs of and designed for the development of each community. The objective of training is also to include preparing youth to be agents of constructive change in society and to help in the renovation of the education system which is at the back of all training.

Human Role in Development :

The twelfth Conference on Human Relations in Industry organised by the South India Textile Research Association of Coimbatore brought together business leaders, government workers, trade union officials and research specialists from all over the country to consider some aspect of the human role in business life. Four subjects were considered in depth; shorter hours of work, wages and productivity, personality and organisation and training and development. The main impression of this valuable confrontation was the uniqueness of the qualities of the individual and their decisive impact on all aspects of work, group decisions and the quality of life generally.

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Seminar on Consumer/User Oriented Research—September 17-19

The three day seminar opened in the Presidency College on Friday, September 17. Eighteen background papers by the participants were written and circulated. The seminar participants included five managers from the public sector, five from the private sector, seven ministers and secretaries to Government dealing with development and forty research specialists from the five Universities (Agricultural University, IIT and the Universities of Madras, Madurai and Annamalai.) and the three Research Institutes in the State (Institute of Techno-Economic Studies, Institute of Financial Management and the Madras Institute of Development Studies) The president for each day — Mr. Sl. Pa. Aditanar, Minister for Co-operation on the 17th, Mr. G. R. Damodaran, Principal, P. S. G. College of Technology, Coimbatore on the 18th and Dr. Sunderavadivelu, Vice-Chancellor of the University of Madras on the 19th—was assisted by Mr. M

G. Raja Ram, Deputy Chairman of the State Planning Commission as the Vice-President for all three days. It is proposed to devote the second special issue of the bulletin for the year, Vol.I Issue No. 11 in December, to a full report on the papers and conclusions of the Seminar. A brief assessment of the seminar will appear in the next issue No. 10.

Special Article :

Meanwhile the decision of this first dialogue between business, government and researchers appears as a special article after the Editorial of this issue. It highlights :

(a) Some 220 research themes for Tamil Nadu development.

(b) A Tamil Nadu Development Research Council to continue this dialogue to finance and facilitate research, the means of finding Rs. 2 crores a year for this programme.

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September Madras Development Seminar :

The September Seminar paper "The Role of Communication in promoting Social Change and Economic Development in India" by Mr. P. V. Krishnamoorthy, Director, All India Radio, Madras, together with a summary of the discussion of the paper in the Seminar appears as the main article in this issue of the Bulletin.

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Second Article :

A second article on "Investment in Agriculture" also appears in this issue.

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Correspondence :

Further communications from the follow up workshop group in Osmania University appear under this section.

DECISION OF SEMINAR ON CONSUMER/USER ORIENTED RESEARCH

Presidency College, Madras, September 17–19, 1971

THE SEMINAR ON CONSUMER/USER ORIENTED RESEARCH

I. Organisation

1. *Convened* by the Madras Institute of Development Studies in co-operation with the Indian Council of Social Science Research to establish a three-year programme of research priorities in Tamil Nadu development,

2. *Meeting* in Presidency College, Madras on September 17, 18 and 19, 1971,

3. *Comprising* managers from the public and private sectors, Secretaries to the Development Departments of the Government of Tamil Nadu, and research specialists from the five Universities and three research institutes in the State,

II. Findings

4. *Having* engaged in a wide ranging exchange of views on the problems faced by the public and private sector enterprises and laboratories and the development departments of the Government in the execution of their work programmes and projects,

5. *Having* also examined the major sectors of the Fourth Five Year Plan of Tamil Nadu from the point of the research studies that need to be undertaken in order to assist in the attainment of their targets, to indicate alternative lines of action to overcome bottlenecks and obstacles to plan execution, and to assemble, analyse and interpret data which are needed or non-existent for plan implementation,

6. *Asserts* as its major finding that research studies oriented to meet the needs of Tamil Nadu development as set forth in its

Fourth Five Year Plan are essential for the Plan's successful execution and for the formulation and implementation of the State's Fifth Plan,

7. *Notes* the needs and the general situation with regard to such development oriented research in Tamil Nadu which includes the following features :

(a) the need for further integral relations between the research resources and specialists in the Universities and the industrial and agricultural community of workers, managers and farmers, consumers and government departments involved in development work,

(b) the need for further research interests and programmes in industry in the State in both the private and public sectors, which continue to rely on foreign technical assistance and technology and the absence of financial resources from Industry and Government allocated to research,

(c) the need for further financial resources to be available to the research and development programmes of the Union Government and for further improvement in its procedures.

III. Recommendations

8. *Believes* that a continuing dialogue is necessary between research specialists in Universities, national laboratories and research institutes and industrial and agricultural leaders and workers and Government departments,

9. *Invites* the universities, affiliated colleges and research institutions in the State to devote a part of their research talent and resources to the work on the themes established at the seminar by the community of business managers, government officials and research specialists, without impairing the fundamental research vocation of the universities and their affiliated colleges,

10. *Requests* the Union Ministry of Planning, Science and Technology and the State Ministries of Finance, Industry, Agri-

culture and Education to provide for increasing financial allocation for research and development programmes, particularly in the Fifth and Sixth Plans so as to amount to 1% of the National and State Income and to reorganise the administrative structure of research in National and State laboratories in accordance with the report of the Sarkar Committee,

11. *Urges* large business units operating in the State in the public and private sector to set aside 3 per cent of their gross expenditure for their research and development work to be undertaken by them or contracted with the universities and research institutes in the State and the Country,

12. *Suggests* that each development department of the State Government establish a research cell to study and identify problems which need research and which can be undertaken by the universities and research institutes in the State and the Country,

13. *Further suggests* that industrial, commercial and agricultural undertakings refer problems that need study to the universities and research institutes as appropriate,

14. *Reaffirms* the recommendations of the Seminar on the role and functions of the ICSSR held at Madras University concerning the urgent need to establish a documentation and data processing centre in the South.

IV. A Three-year Programme of Research Priorities.

15. *Identifies* the following three-year programme of research priorities in Tamil Nadu Development which should be investigated as far as possible before the expiration of the Fourth Five Year Plan in 1973-74, and the balance of the themes in the succeeding years.

A. General

1. Ideological socialism and State Capitalism.
2. Social and cultural traits of Tamil culture impeding growth and development.
3. Gap between targets and achievements.

4. Growth rate of Tamil Nadu.
5. Alternative strategies and techniques for Tamil Nadu development.
6. Status of research in universities and research institutes in the State.
7. Techno-economic survey of the State.
8. Techno-economic survey of Dharmapuri and Ramanathapuram and other districts established as backward.
9. Feasibility studies on the new industries proposed in the Fourth Plan.
10. Operations research and systems analysis as applied to
    - (a) sale-cum-production and capacity utilisation of Tamil Nadu industries,
    - (b) transport services in ports, air-ports and roads in the State,
    - (c) co-ordination of Central and State Planning.
11. Regional resource surveys of water and minerals.
12. Tamil Nadu trade relations with South and East Asia.
13. Inter-State Trade movements.
14. An Income/Price policy for the State.
15. Consumption patterns in different regions of Tamil Nadu.
16. Family budgets in major industrial centres.
17. Market study and analysis of consumer spending and income distribution in the State.
18. Improving the conditions contributing to man's psychological and social development.
19. Improving the conditions contributing to man's physiological health, nutritional status and development for maximum work efficiency and economic productivity.
20. Optimum use of Tamil Nadu labour in relation to development of agriculture, industry and commerce in Tamil Nadu.
21. Impact of transport costs on industrial growth and agricultural development.

22. How research can become an input in the public and private sector.
23. Model building and use as a means of deciding priorities for Tamil Nadu development.
24. Data processing and computor programming.
25. Producer-cum-consumer research.

B. **Industry**

26. Cost reduction in cloth industry.
27. Consumer needs and preferences for specific characteristics in textile products including style, and level of performance and maintenance.
28. The problems of sick textile mills.
29. Establishments of standards for clothing sizes through research on anthropometric measurements and progressing of all segments of the population.
30. Operative efficiency of the sugar industry and the optimum cane growing area.
31. Steel planning and the Salem Plant.
32. Marketing of hosiery products from Tirupur.
33. A foundry research institute in Coimbatore.
34. Demand forecasts for auto-spare parts.
35. Economics of a Tamil Nadu Corporation for buffer stocks of industrial raw materials and spare parts.
36. Nutrition base of pharmaceutical products.
37. Commodity studies (industrial gap) in :
    * Electronics
    * Plastics
    * Fine Chemicals
    * Dyes
    * Oil
    * Tobacco
    * Silk
    * Cashewnuts

* Leather
* Light Engineering Goods
* Heavy Engineering Goods
* Paper
* Linkages between auto, cycle and radio industries.

38. Cost estimates and cost control of public sector undertakings.
39. Economic evaluation of Neyveli.
40. Ancillary industries around Neyveli.
41. Ancillary industries around Salem Steel.
42. Economics of Modern Rice Mills.
43. Slow rates of expansion of electricity intensive and chemical industries.
44. Bench-mark survey of Tuticorin complex.
45. Bench-mark survey of Salem-Neyveli complex.
46. Problem of unsold stock of handloom industry.
47. Power-looms and their impact on wages, employment, and productivity and finance.
48. Industrial estates in relation to the objective of promoting growth centres in backward regions.
49. Industrial Estate for electronic industries at Adyar.
50. Export oriented industries of Tamil Nadu.
51. Survey of problems of major cottage industries.
52. Substitutes for scarce industrial raw materials, steel cotton and copper.
53. Industrial specialisation between States.
54. Location, transformation, restructuring and dropping of industries in Tamil Nadu.
55. The role of the entrepreneur in the engineering industry.
56. The role of the worker – manager.
57. Economic management, time scheduling and administration of public sector industries in Tamil Nadu.

58. The place of the economic calculus in public sector undertakings.
59. Casteism and communalism in public sector undertakings.
60. Consumer goods industrial policy.
61. How far is the I.S.I. effective in the standardisation of consumer goods.
62. Problems in consumer education.
63. Appraisal of the Institutional basis of Industrial Finance in the State.
64. A Technology map of Tamil Nadu.
65. A revised employment oriented industrial programme for the State.
66. Research personnel needs of Tamil Nadu industries.
67. Impact of Research and Development on Industrial output.
68. Evaluation of industrial research and patents and their commercial exploitation.
69. The communication gap between research institutions and industry.
70. The place of indigenous and foreign technology in the State's Industrial Development.
71. Economics of retail distribution.
72. The impact of the licensing system in Tamil Nadu Industries.

C. **Agriculture.**

73. The place of middle men in the agriculture industry.
74. Mobilisation of rural savings through taxation and institutionalisation.
75. Rural underemployment studies by blocks and districts.
76. Economics of high-yielding varieties—paddy, pulses, sugarcane and cotton.

77. Economics of minor irrigation works.
78. Impact of irrigation on cropping patterns, land utilisation and agricultural investment.
79. Utilisation and pricing problems of irrigation in the Thanjavur district.
80. Planning and development of growth centres.
81. Impact of high yielding variety on small and tenan farmers.
82. High yielding variety areas and agricultural indebtedness.
83. Economics of dry farming technology by crop and area.
84. Economics of horticulture—grapes, bananas, mangoes and coconuts.
85. Cement flooring device and rice cultivation in Trichendur.
86. Tractorisation in Thanjavur and Coimbatore.
87. Appraisal of Tamil Nadu forest resources and policy.
88. Economics of dairy and milk supply in urban areas.
89. Economics of development of cattle, sheep, poultry and piggery.
90. Development of Fisheries in Tamil Nadu.
91. Warehousing and marketing.
92. Economics of Bhoodan movement and Land Ceiling Acts of 1961 and 1971.
93. Economics of Co-operative Marketing Societies.
94. Institutionalisation of credit to the small farmers.
95. Consumer Co-operatives.
96. Land Development Banks.
97. Appraisal of Community Development in the State.
98. A soil Atlas for Tamil Nadu.
99. Rural Public Works in dry farming and irrigated areas.
100. Agrarian tension in Thanjavur.

101. Role of rural institutions, panchayats, co-operatives, etc. in stimulating agricultural development.
102. Effectiveness of different media of communication in spreading innovations among cultivators.
103. Evaluation of working of Small Farmers Development Agency.
104. Economic Surveys for introducing crop insurance and cattle insurance.
105. Evaluation of State Farm Schemes.
106. Variation and behaviour of agricultural price in the State.
107. Influence of price variations on cropping patterns.
108. Economics of foodgrains procurement.
109. Procurement levy and marketing of agricultural products.
110. Terms of trade of Agricultural inputs and outputs.
111. Management problems in the plantation industry.
112. The terms of trade between agriculture and industry during the three Tamil Nadu Plans.

D. **Education** :

113. Social cost of wastage of education at various levels.
114. Job oriented rural education.
115. Vocationalisation of secondary education.
116. Input-output tables of higher education.
117. Survey of utilisation and optimisation of public and rural libraries.
118. Cost of adult illiteracy.
119. Economics of educational technology for the State.
120. Survey of education of scheduled and backward classes.
121. Unit cost of education at various levels.
122. A science plan and policy for Tamil Nadu.
123. Education and training needs for the Fifth and Sixth Plans of the State.
124. Role of youth and students in State Development and planning.

125. Sociology of Education in the State.
126. Out of school education and training as a complement and substitute for secondary and post-secondary education.
127. Continuity and innovation in Tamil Nadu Education.
128. Quantitative expansion and qualitative excellence in Education.
129. Guidance and counselling services.
130. The learning process.
131. Mobilisation of public resources for education in the State.
132. Educational management in Tamil Nadu.
133. Comparability and comprehensiveness of education statistics.
134. Education as a means of democratisation in Tamil Nadu.
135. Evaluation of and priorities in Tamil Nadu Education.
136. Manpower units in universities and college to guide student specialisation.
137. Search and reward of talent.
138. University and college management.
139. Typology of university and college research in Tamil Nadu.
140. Universities as focus of renaissance of fine arts and music.
141. Universities and colleges as training ground for Tamil Nadu industry and agriculture.
142. Research on documentation.
143. Tamil Nadu needs for integrated programme of health, family planning, recreation and community welfare education.
144. The absence of education research in Tamil Nadu.
145. Problems of brain drain in Tamil Nadu.

E. Employment.

146. Forecasts of manpower needs and resources in Tamil Nadu.

147. Study of agricultural wage trends.
148 Rural – urban migration.
149. Wage differences, productivity and conditions of service.
150. Labour unrest in the public sector.
151. Educated unemployment in the State.
152. Projections of needs for medical, engineering and agronomic personnel for Fifth and Sixth Plans.
153. Rural Public Works, employment and the Fourth Plan.
154. Employment generation in the Fourth Plan.
155. Surplus labour in the rural areas by blocks and districts.
156. Impact of modernisation of agriculture on rural employment.
157. Self-employment—possibilities and prospects in Tamil Nadu.

r. **Health and Family Planning:**

158. Evaluation of Family Planning measures by development blocks and districts.
159. Massive production of food at appropriate nutritional levels.
160. Case studies of birth rate reporting and registration.
161. Case studies on attitudes, motivations and preferences with regard to family planning.
162. Relationship between better health and fertility control.
163. Social and religious values and family size.
164. Reproductive physiology, contraceptive technology and the ideal contraceptive.
165. Biological and psychological effects of sustained use of contraceptives.
166. The Cochin Vasectomy project and its lessons for Tamil Nadu.
167. Alternatives to Family Planning.
168. Analysis of data on Family Planning available in the Department of Health and in the Blocks.
169. Cause for dropout in diptheria control programme.

170. Differential attitudes towards abortion.

171. Emotional and health implications of abortion.

G. Fiscal and Credit.

172. Incidence and growth rates of various taxes.

173. Study of savings potential, growth rate of savings propensities and disincentives to save — means of mobilising new fiscal resources.

174. Capital gains tax as supplement to wealth tax.

175. Agricultural income-tax.

176. Incidence of road transport taxation.

177. Study of fiscal resources of Panchayats and Panchayat Unions.

178. Effect on consumer spending and small savings of abolition of prohibition.

179. Excessive emphasis on indirect taxation and its effect on growth.

H Power.

180. Power rating and distribution efficiency of electricity undertakings by licensees.

181. Techno-economic survey of rural power transmission and distribution.

182. Inventory and stores control in the power industry.

183. A material cost index for the Electricity Board.

184. Productivity augmentation due to lift irrigation by electricity.

185. Problems of costing in the power industry.

186. Inter-State power grids.

187. Inder-State river linkages.

188. Provision of cheap power and alternative sources of energy.

I. Housing and Public Works.

189. 1980 projections of Housing requirements, urban and rural.

190. Rent control and urban housing.

191. Manpower needs for Housing programmes.
192. Master Plans for urban centres of the State.
193. Housing construction for the Low Income Group.
194. Land acquisition and development for building sites.
195. The Mahalingam Plan for urban development.
196. Problems of Industrial Housing.
197. Problems of suburbanisation.
198. Economics and sociology of slum clearance.
199. Model House designs adapted to local conditions and materials.
200. Housing as symbol of social status.
201. Development of new concepts of space, with emphasis on storage, task performance, leisure activities and anticipated technological changes.
202. Impact of single type neighbourhoods on socialisation of children.
203. Improving the health and sanitation aspects of housing.
204. Time Study on labourers engaged in building work.
205. Financial allocations for home making.
206. Roads as infrastructure and as a means of employment generation.

J. Welfare.

207. Pollution in Madras City.
208. Environmental pollution in Tamil Nadu.
209. Beggar relief and rehabilitation.
210. Impact of welfare programmes for Backward Classes.
211. Varying rates of progress of Backward Classes.
212. Restraints on conspicuous consumption.
213. Unemployment relief.
214. A State-wide programme of low priced supply of rice, cloth and kerosene for the urban and rural poor.
215. Improving the quality and availability of community services which would enrich family life.
216. River sanitation.

K. Nutrition.

217. Economics of mal-nutrition and cost of nutrition.
218. Nutrition and productivity.
219. Nutrition and working efficiency.
220. Nutrition and family size.
221. Nutrition and learning abilities.
222. Assessment of economics and nutritional impact of the sponsored programmes, School lunch, A.N.P., Infant pre-school and other feeding programmes.
223. Development and evaluation of food supplements.
224. Effects of food processing and packaging methods on food quality, nutritive value, safety, cost, acceptance in homes and catering institutions, and economics of nutrition.
225 Determining consumer needs and desires for new foods —partially and fully prepared ready to eat— foods.
226 Standardisation of recipes and cooking procedures for catering and aided feeding programmes.
227. Dietary habits and nutritional status.
228. Effectiveness of educational effort and dissemination of nutrition information.
229. Economics and nutritional implications—vegetarian vs. non-vegetarian.

V. Action

16. *Invites* the attention of the Universities, affiliated colleges, Institutes of Higher Education and research institutes in the State to the research themes established in paragraph (15) on which work should be completed in accordance with a phased time schedule, with particular reference to the next three years.

17. *Points* out the need for a rational distribution of the research themes among the institutions on the basis of their research resources, equipment. expertise and the environment in which they are located,

18. *States* that despite the suggested distribution of research work proposed in paragraph (17), the freedom of any institution to choose any theme listed in paragraph (15) remains unimpaired,

19. *Recommends* that the Madras Institute of Development Studies publish information on research undertaken in its monthly bulletin so that all institutions are informed of the work planned and so help avoid unnecessary duplication.

20. *Calls* the attention of the Indian Council of Social Science Research, the University Grants Commission, the Union Planning Commission and Government, the Government of Tamil Nadu and the State Planning Commission to the need to assist in the financing of the Research work that will be undertaken by the Universities and Research Institutes and in some cases contract with them for specific studies in relation to the priority themes established by the Seminar in paragraph (15),

21. *Urges* on the Government of Tamil Nadu that it allocate 1 per cent of future annual development budgets and allot 20% of the basic land revenue collection now amounting to Rs. 5 crores (which will involve re-consideration of the proposal to abolish it), in order to finance the development-oriented research for Tamil Nadu listed in paragraph (15) on the advice of the machinery proposed under paragraph (22).

22. *Suggests* that the State Planning Commission, in consultation with Universities and other proposed participants, help in establishing and running a State Development Research Council, with sub-council in the major industrial and research centres in the State, consisting of research specialists of the Universities, their affiliated colleges, Institutes of Higher Education, the research institutes, and the national and State laboratories, representatives of the development departments

of the State Government and the private and public sector in order to continue the dialogue among research producers and consumers started at this Seminar, to review, revise, update and harmonize the development research tasks of the Universities and Research Institutes, to help establish a time path for the suggested research investigation, and to be responsible for raising and disbursing the finances allotted to the research programmes.

"ROLE OF COMMUNICATION IN PROMOTING SOCIAL CHANGE AND ECONOMIC DEVELOPMENT"

By

MR. P. V. KRISHNAMURTI

Station Director, All India Radio, Madras.

In the 1920s it was believed that communication could influence public opinion all by itself and 'propaganda' through *the mass media* (*it was the press then*) was considered all-powerful. The Radio came into its own in the 30s, in the US, and "the Roosvelt campaigns proved that newspaper had lost its influence and that a 'golden voice' on the radio could sway men in almost any direction".* Later the Nazi experience was quoted and the theory expounded that sustained propaganda through the media, specially radio, could accomplish what economics, education and even armaments could not. The media, specially Radio, was considered a 'monster' and people were worried about the possible effects of Radio, film and comic books on people's minds and behaviour. When TV came in and children became greatly interested in the medium their worries increased. But research findings, specially in the United States by scholars like Schramm, Berelson, Gaudet, Lazarsfeld, Katz** and others helped to dispel this unfounded fear. There were, however, others who held that the media were essentially for entertainment and so made little or no difference economically or socially. Both these points of view have proved to be off the mark. The media are neither all-power-

* Bernard Berelson: 'Communication and Public Opinion' included in 'Communication in Modern Society', University of Illinois Press (Urbana 1948)

** Personal influence: Elihn Katz and Paul Lazersfeld-Glenco-Illinois The Free Press 1956

The Process and Effects of Mass Communication: Wilbur Schramm-University of Illinois Press 1954

The People's Choice: Lazarsfeld, Berelsen and Gaudet: Columbia University Press 1948.

ful monsters nor are they mere empty entertainers. Bernard Berelson summed up the effects of communication simply when he wrote "Some kinds of *communication* on some kinds of *issues* brought to the attention of some kinds of *people* under some kinds of *conditions*, have some kinds of *effects*." Again, there are some scholars, mostly economists, who believe that mass media merely follow economic development i.e., with more money, there are more radios, newspapers, films, TV receivers etc. This is only partially true. At the other end of the argument we have the media fanatics, specially those who sell the hardware, the gadgets and tools of communication who are keen to establish the view that the spread of mass media is the panacea for all the ills of the world. Here again, the truth is somewhere midway. The case studies of Rao (India)[1] Lerner (Turkey)[2] and Doob (Africa)[3] show that communication is fundamental to all social process. Rao tried to locate the prime mover. What moves what ? Which comes first, economic development or communication ? His conclusions are that "it is futile to attempt to treat this interaction between communication and economic development as a causal relationship and isolate the chicken from the egg. The interaction is constant and cumulative*."

Since we are discussing the role of mass media in *development* it will be appropriate at this point to define the *objectives of development*. " Man and the full life of Man constitute the ultimate purpose of development " is the succinct declaration of UNESCO's International Conference on Educational Planning meeting in Paris in 1968. Commenting on this Dr. Adiseshiah in his book " Let my country awake " * remarks " Development is Man, Man who is the beginning, the end, the objective and finality of all development " .... Dr. Adiseshiah's approach to

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1 * The Role of Information in Economic and Social Change : Report of a field study in two Indian Villages : University of Minnesota 1963.

2 The Passing of traditional Society-Daniel Lerner : Glencoe Illinois Fren Press 1958.

3 Communication in Africa-A search for boundaries-Leonard W. Doob New Haven : Yale University Press 1961.

* Let my country awake—Malcolm S. Adiseshiah—UNESCO 1970.

development will not countenance "pursuit of wealth or the increasing of profit as a given element, an automatic and decisive standard setter to which educational instruction, family obligations and social values must conform". He continues, "in order to make people seek an increased quantity of goods and services such values as power, respect, rectitude, affection, well being and enlightenment must be reshaped and restored". To illustrate this point Dr. Adiseshiah relates an amusing incident with a fisherman, narrated to him by a development planner, which reads more like a parable. Strolling on the shores of a lake in a developing country the planner met a fisherman stretched out happily in the warm sun. They got into conversation and it ran thus:—

"Why are you not out on the lake fishing?"

"Oh, I caught a big haul yesterday which brought me enough in sales to last me for three days, so why should I fish today?"

"Because if you fish today, you can have more money than you have today".

"This is true. But why should I have more money than I have today?".

"Because with more money you can buy a large mechanised fishing boat".

"That is true. But why should I have a large mechanised fishing boat?"

"Because with it you can catch ten times more fish and have ten times more money".

"That is true. But why should I catch ten times more fish and have ten times more money?".

"Because with that money you can build yourself a large palatial house and a swimming pool".

"That is true. But why should I have a large palatial house and a swimming pool?"

"Because you can then enjoy life and lie in the sun lazily all day".

"That is true. Ah, but that is what I am doing now, am I not?"

Fascinating conversation! This story has great significance for communicators and development planners. To me as a communicator, the parable has two messages (a) Mere promises of goods and services will not induce people to give up traditional attitudes (b) It is necessary to bring about *attitudinal change* before any *change in behaviour* can be expected.

Dr. Adiseshiah commenting on this incident says, "Economic behaviour, so called, is a function of the total behaviour pattern established by an individual and society and not the other way round. Quantitative changes (all economic changes are quantitative or they are not economic) become valid for development only in so far as they work through and involve structural changes".

Another egg or chick debate is whether social change precedes economic development or vice versa. Asok Mitra of the Planning Commission in an article on the "Role of Communication in promoting Social Change"* pleaded for a critical appraisal of the 'facile belief' in India that economic change automatically brought about social change. His thesis is that in the last twenty years economic change, far from being a catalystic agent has served to stabilize and consolidate traditional social institutes like casteism, communalism, linguism etc. Mitra pleads for extensive and intensive use of mass media for accelerating social change.

How does social change occur? Normally it is a slow and long drawn process. Contact over a long period of time with an alien culture leads to borrowing or adapting of customs, beliefs and modes of behaviour. It may also come about more quickly through application of force as in the case of conquest and occupation. The latter method, though quicker, may not stand the test of time. To developing nations which are in a hurry to advance the historical process is too slow and the use of force unacceptable. They want change to be achieved voluntarily with the willing participation of their people. They would prefer persuasion to force and in place of the measured and slow rhythm of acculturation a sustained flow of relevant information. The mass media could be profitably used both for motivation and persuasion.

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* Statesman, New Delhi-21st October 1968

Earlier, in this paper, I have quoted the five variables suggested by Berelson viz., communication, issues, people, conditions and effects. The more 'personal' and 'intimate' the media the greater will be the effectiveness. For example, a personal, face to face contact is better than a radio talk. The radio talk will in turn be better than a newspaper *article. TV presentation is even more* effective. Kate Smith who sold $ 40,000,000 worth of war bonds in one day's radio broadcast would perhaps have done infinitely better on TV.

Media have a greater chance of influencing people on new or unstructured issues; i.e., those not particularly correlated with existing attitude clusters. Issues that are *peripheral* can be tackled easier than ones that are *crucial.* The Media can help to modify attitudes and behaviour loosely held but may fail to alter firmly held or deeprooted beliefs. Research also reveals that media can influence opinion on '*personalities*' rather than on '*issues*'.

The nature of the audience is vital to the success or failure of communication. The number of people exposed to the various media should be known. Not all people get exposed to all media. People are known to turn to media that *confirm* their convictions for legitimization of their actions but *avoid* those that are not in consonance with their beliefs. In fact people are known to have even *distorted* the message to suit their convictions. In India, we will have this problem when combating communalism, casteism and other deep rooted prejudices.

Then we have the monopolistic and competitive exposures. Though monopolistic communication has an edge over competitive, its effectiveness is not unlimited. The Nazis had a monopoly but did not carry the entire German people with them in their political philosophy.

Having dealt with the strengths and limitations of mass media in general I would like to turn my attention, specifically to the Indian scene. What are the problems of communication in our country? To my mind they are threefold.

Problem No. 1 is *Inaccessibility.* Ours is a vast country, a subcontinent in fact, sprawling across an area of nearly 1.26

million square miles and containing a varied topography of soaring mountains, plateaux, valleys and deserts. We have practically all the climates of the world from the snow capped Himalayas in the far north to the sub-tropical moist regions of the South. Large tracts of the country are cut off for quite some months of the year with swollen rivers. Attempts to 'link' the land by air, road, rail and canal are proceeding apace but since 'Time' is of the essence in National development, we have to look elsewhere for communicating the message of development. High mountains, surging rivers aud sprawling deserts are no obstacles to radio communication. *If* there is a powerful enough transmitter and *if* the people in the remote areas have the listening facilities, the message can get across. But both 'ifs' are formidable, specially the latter.

Problem No. 2. is *illiteracy.* Though about 45 million pupils go to school in India, the literacy rate is about thirty percent. The written or printed word has little or no meaning to seventy per cent of our people. In India, through the ages, we have had a rich tradition of the spoken word and Radio which is indeed the spoken word the medium par excellence can be made to play a vital role in communication, till TV is spread sufficiently.

Problem No. 3. *inadequacy of Extension workers, teachers, monitors etc.* There are 560,000 villages in which 10% of our people live. To recruit, train and position field workers and teachers to serve this widely dispersed population is a stupendous task which is both collosal and time consuming. Since 'Time' is of the essence we cannot wait. Radio is a part-answer to this problem. Experienced extension men, trained in broadcasting, could be utilised to communicate with these far flung people. With all its limitations as a teaching medium, Radio can certainly communicate vital information, quickly and in the language or dialect of the people. Radio can also be used to keep the extension and field workers and teachers up-to-date with new knowledge and latest techniques. It would appear that Radio can be used to fill the information gap at least till the land is adequately linked by surface communication and the isolation of the villages is broken.

Having stated the broad case for Radio, I would like to take some specific segments of development, particularly relevant to India, like Agriculture, Family Planning and functional literacy and examine the contribution that Radio can make to them.

Agriculture: We owe a debt of gratitude to rural sociologists like Rogers*, Bohlen and Beals for their contribution to the general concept of the *'diffusion process'* in the adoption of new ideas and practices, specially in the field of Agriculture. It would be interesting to investigate as to how effective Radio is and to what extent it can assist in the *Adoption Process*. Sociologists have identified five stages in the process of adoption, First there is the *Awareness* stage, when a person first knows about a new idea or practice. Radio is very effective and useful at this stage as it can convey the message or information quicker and perhaps even cheaper than any other agency. This is followed by the *Interest* stage when the person's interest has been kindled about the new idea or practice and he is anxious for additional information. At the interest stage also Radio can play a vital role by constant repetition of the original message which is then reinforced in the mind of the listener. Repetition helps to arouse his curiosity. Merton has reported that "repetition, particularly repetition with variation has been found to increase the efficacy of persuasion". Farm Broadcasters have an infinite variety of broadcast techniques, like straight talks, interviews, playlets, songs etc. which they can exploit to repeat a message in a wide variety of ways. For example when ADT 27 was introduced in the Tanjore district, the Tiruchi Station of All India Radio took up its publicity and kept pumping information about this paddy strain systematically and utilised all the techniques known to broadcasters. The results were most encouraging and an FAO evaluation mentions that this paddy strain came to be called "Radio Nellu" (Radio Paddy) by the farmers of the area because their first source of information about this seed was Radio and the radio broadcasts helped to motivate and sustain interest in the seed.

E.M. Rogers—Diffusion of Innovations.
Free Press 1963.

* Mass Persuasion—R.K. Merton—Harper 1946.

His interest aroused, the listener is now anxious to compare notes and check with his kinsmen, friends and neighbours about the validity of this message in terms of his own environment. This is the *Evaluation* stage and at this stage friends, neighbours local opinion leaders play a more important role than mass media like Radio. This desire to "talk it over" with as many like-minded people to check on what the others are thinking and what they propose to do, is a psychological need. This need could be exploited for better communication if those interested in development could help to create a discussion group or a forum. It was only a few years ago that communication research rediscovered the 'Group'. Katz and Lazarfeld wrote "many ostensibly individual opinions and attitudes are the norms of groups to which the individual belongs or wishes to belong". This means that opinion and attitude change is rendered possible if it is *not* contrary to group norms. But most modern ideas and techniques could be repugnant to generally accepted norms especially in tradition bound societies like our own. Wilbar Schramm writing of these confrontations in his "Mass Media and National Development"[1] cites how Kurt Lewin's experiments with housewives proved that merely "lecturing to them or letting them to read articles accomplished relatively little. But when he gave them a chance to discuss the problem, very often the whole group decided to try the new meat dishes. And with the social backing of their peers—the knowledge that everybody was doing it, and therefore it was an approved social norm, most of the women actually did use the new and unfamiliar cuts of meat". Similar results were obtained by Levine and Butler[2] in changing the behaviour of supervisors in an industry. The results were almost exactly those Kurt Lewin got. Without the opportunity to "talk it over" and get the whole group somewhat committed to change very little happened. Schramm concludes "participation in decision making is therefore a powerful device to speed and smooth social change where group norms are involved, where it is omitted, a programme runs a great risk". Schramm is of opinion that the forum is "potentially of great value in changing

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1 Mass Media and National Development—Wilbur Schramm. Stanford University Press, Stanford. California, U. S. A.

2 "Lecture vs Group decision in Changing Behaviour" Journal of Applied Psychology, 36 (1952).

group anchored attitudes and behaviour, because the discussions permit an entire group to change without requiring an individual changer to deviate from the group". The label "Pluralistic Ignorance" has been popularised by Katz and Schanck. "People will stay in line because their fellows do, yet, if they only know that their comrades wanted to kick over the traces too, the group would quickly vanish". Radio forums can provide the proper environment, atmosphere and opportunity for individual changers to discard old and obsolete practices and adopt new and modern techniques. In short the forum can play a vital role in helping its forum members to learn, to discuss and evaluate and finally to decide and act. Radio on its part has to provide appropriate programmes which would instruct, inform and motivate and these programmes could be the starting point for group listening, group discussion, group decision and group action.

Organise a homogenous group around a radio or TV receiver, introduce a problem through a competent programme, give the group or forum opportunity to discuss the issues threadbare, let every member participate in the decision making and finally encourage group action. If appropriately printed materials like pamphlets, posters and flip charts are also made available simultaneously this would reinforce the impact of the broadcast programme. This is the principle behind the Radio Rural Forum whose motto is Read-Listen-Discuss-Act.

The idea of the Radio Forum which was born in Canada in 1941 has now spread to many countries and in India it has come to stay. We shall revert to a detailed description and estimate of the Indian experience.

To continue with the role of radio in the adoption process—with the reassurance and group sanctions obtained from the forum, the individual steps into the next stage—the *Trial Stage.* Trial is always cautious, a trifle slow. Face to face communication assumes great importance at this stage. The field workers and extension agents have to be readily available to help the farmer to try out the limited trials on his own field. Demonstrations laid out on the farmer's own field have a vital role to play. Radio and other mass media recede to the background. When the trials

have given satisfaction and confidence has been built up in the farmer's mind, the final stage is reached—the stage of total *adoption*. Radio can now step in and record interviews with the successful farmer and publicise his experiences. The broadcast of such experiences will in turn reassure and motivate other lingering listeners to take another forward step towards total adoption. Thus we see that Radio has an important role to play in the Adoption process, very effectively at the Awareness and Interest stages. At the Evaluation stage, it could feed appropriate discussion-cum-action oriented programmes for listening groups and lastly help to *publicise* the good work of farmers at the Trial and Adoption Stages.

Rural Broadcasting in India—Historical Perspective.

When India achieved Independence in 1947 there were only half a dozen radio stations and about a dozen transmitters with about 275,000 radio receivers. The transmitters covered less than 10% of the country and fewer than 25% of the population could get a good signal on medium wave. By the end of the Third Plan more than 60% of the area, and about 75% of the population have been covered and in the Fourth Plan it has been proposed to cover more than 80% of the area and about 89% of the population with a good medium wave service. At present the total number of receivers is over 11 million so that there is just under two sets as against the UNESCO minimum of five for every 100 persons. Since most of the villagers were unable to afford domestic receivers, special arrangements were made by Government to provide "community receivers" under a special Subsidy Scheme. The Centre, the States and the local communities shared the cost, the Centre's contribution being 50%. About 200,000 community receivers have been supplied under this scheme. The Centre has now given up the subsidy scheme but most of the States prefer to encourage the Panchayats to buy sets on their own.

Radio Farm Forums—Poona Project :

As early as 1948 it was realised that merely distribution of receivers to rural communities would not achieve much unless the largely illiterate and tradition bound rural people are also taught to get-together, listen, discuss and undertake action. A small

start had been made with the formation of some 200 listening clubs when UNESCO, in pursuance of a decision of the General Conference decided to find out whether the techniques of the Canadian Farm Radio Forum might not prove equally effective in the villages of India "because of the work accomplished by India in the field of fundamental education, and of the existence in that country of a well developed broadcasting service." The offer was accepted by the Government of India and sponsored and financed by UNESCO, was carried out in the then Bombay State with the co-operation of that Government, in the early part of 1956.

145 villages were chosen spread over the five districts of the Bombay State which were uni-lingual (Marathi speaking). The organisers toured extensively in these villages and organised forums of about twenty members in each village with the assistance of the leaders of the villages. These members, though not all literate, were progressive in outlook. The convener of the forums had necessarily to be literate to enable him to jot down points from the broadcasts and also to correspond with the Radio Station. The chairman, however, was a respected member of the village community, more often than not the chairman of the Elected Council (Panchayat) or Headman (Patil). No salary was paid to them but a small sum was made available to meet the cost of stationery and postage.

Twenty programmes, specially designed by a subject committee of experts, were planned and produced by All India Radio, Poona. Though the bulk of the subjects was on Agriculture; health, hygiene, public institutions, cooperation and education also found a place. A variety of radio techniques were employed with much success. Queries sent by the forums after listening were dealt with in the Listener's Corner and this gave the forums a sense of participation and belonging. All India Radio sent every forum a fortnightly guide which gave details of the programmes and also some leading questions to help generate healthy discussion.

The Poona Farm Forum Project was evaluated and the report published by UNESCO* was encouraging.

* An Indian experiment in Farm Radio Forums–J. C, Mathur and Paul Neurath. UNESCO 1959.

The salient findings were :

1. The forum groups showed a very impressive gain in knowledge. The gain was equally impressive among the different groups in the forums-illiterates and literates, agriculturists and non - agriculturists.

2. The group method of discussion proved extremely successful.

3. The group method of discussion brought with it an opportunity to learn both from meeting and discussing things together and from making decisions.

4. The group method of discussion tends to bring out into the open a good deal of knowledge that is latent in the villager.

5. The Radio Farm Forum has or can become an important institution in village life :

   (a) as a decision making body that can speed up common pursuits of the village, and

   (b) as a tool for forming a broader-based and better founded village democracy than the elected village council provides,

   (c) The Radio Farm Forum is a most valuable addition to village life and it should be a permanent feature thereof.

It was in January 1959, that a decision was taken to extend the forum scheme to the entire country. The Directorate General of All India Radio drew up a *Guide for Field Organisation* explaining in detail the duties and responsibilities of the functionaries, the members and the field staff.

The Guide defined the Radio Rural Forum as "a club of about 15 to 20 villagers who wish to listen, in an organised way, to selected radio programmes, to use such programmes as a starting point for discussion among themselves, to increase their knowledge and information through such programmes and if possible to put into practice some of the things that they have learnt through this process. Such a forum is not a club for those who seek entertain-

ment nor is it a government committee wielding any authority, it is a kind of social education centre, whose members wish voluntarily and without fanfare to expand the horizons of their knowledge, to become better citizens and to express themselves freely but with restraint and politeness on their day to day problems. In other words a radio rural forum is a "listening-cum-discussion-cum-action group of villagers."

Although there has been no detailed evaluation of these forums on the lines of the Poona report, several useful studies have been made from time to time by independent bodies like Universities, Research Institutes, etc. By far the most important of these was a report by a Study Team on Five Year Plan Publicity consisting of a group of distinguished citizens. This team evaluated the radio forums as part of the total information scheme and in the light of what could be accomplished by the forums compared with other means. The Study Team concluded "There can be no doubt at all about the general impact of the forums on rural life, particularly on the introduction of advanced methods of farming and allied pursuits. It is a programme which deserves to be accorded first priority in Five Year Plan Publicity. Another study by a group of students of the Osmania University of some forums near Hyderabad stated "It is an excellent medium.... (and) should be sufficiently recognised as a medium of educating the villagers". The most recent finding on forums is contained in a research report by the National Institute of Community Development, Hyderabad, entitled "Communication in India—Experiments in introducing change"—Evaluating their studies of villages around Lucknow the authors say "We would advise increased use of radio farm forums where they can be organised, so as to elicit villager participation"—They add "... radio, in the form of radio farm forums, has utility for convincing potential adopters to take up new practices".

It must, however, be confessed that the success in forums was not uniform throughout the country nor did they multiply as quickly as we desired. Schramm explains this phenomena as the "Hawthorne effect". In a pilot project there is much motivation, enthusiasm, money becomes available and everyone wants to put his best foot forward. But when it becomes a large and continuing

programme there is less motivation, less money and practically no publicity. The results are obvious and "in a country like India the logistics of expanding a programme nationally are tremendous".

Dr. Schramm sounds a note of warning and says "This is a potent tool". But as we have said, the tendency is to underestimate the amount of support it needs to operate effectively. It will not run itself. It needs a field staff to organise forums and help them to confront problems. It needs co-operation from the field staff of all the development agencies. When the point of decision is reached, it needs additional information and sometimes expert guidance and material help if a truly significant community innovation is to result. These are the lessons of the Indian experience.

A detailed description of the Radio Rural Forum project from 1959 to 1965 is available in the UNESCO publication "Radio Broadcasting Serves Rural Development"—Reports and Papers on Mass Communication No. 48. This report prepared for the UNESCO by B. P. Bhatt, the then Director General, All India Radio and P. V. Krishnamoorthy the author of this paper, gives a factual account of the progress of the project, the alterations and modifications introduced on the Poona model to tailor it for All India application, and lays bare the limitations inherent in expanding a pilot project to national dimensions.

Intensive Farm and Home Broadcasts.

In the Fourth Plan, a major strategy for achieving the target of additional agricultural output has been the introduction of High Yielding Varieties of rice and wheat as well as hybrids of maize and millets over an area of about 32.5 million acres. The bulk of this area lies within the 130 districts already working on the intensive programme.

It has been realised, on all hands, that to bring about this vast technological change, an intensive programme of farmer education will have to be organised. About 10.2 million farm families are involved. Realising the important role that radio can play

as a spoken word medium par excellence, tc motivate, guide, inform and educate such large numbers, especially in a tradition bound illiterate society, All India Radio was called upon to set up special broadcasting units in these areas.

As a first step, sixteen Farm and Home Broadcasting units were set up in different States to lend active educational support to intensive agricultural programmes. Each of these units cover three to four districts, based on the homogeneity of crops, practices and dialects spoken. The radio programmes are designed to be field-based and problem-oriented. The initial response to this experiment has been encouraging and more than 40 such units are to be established.

To begin with, each of these Farm and Home unit broadcasts 30 to 40 minutes segments of hard core agricultural/informational programmes. The programmes are *problem oriented* and strictly *based on the calendar of operations* in the field. The accent has been laid on *field based* programmes. The voice of the successful farmer has to be heard more and more to give a sense of belonging to the farming community. Moreover, farmers like to listen to the experiences of fellow farmers, rather than others who have no real stake in farming. A few stations have also started a ten-minute morning service which consists of weather, market rates, hints and other items of topical farming interest used on the calendar of operation in the field. This is being extended to all stations as facilities become available.

An interesting programme called *'Calling all Extension Workers'* has been started in a few stations as part of the morning service to provide day to day guidance from the top to the worker at the grassroot level. Thus a direct line of communication through radio has been effective especially in times of crisis like floods, drought, bad weather, pest attacks, epidemics etc. This line of communication could also be used for teaching and keeping the extension workers abreast of the latest findings.

Some stations have experimented with arranging symposia and group discussions on topics of interest to farmers. The symposia is held once a month and the initiative of organising it

is left to any one successful farmer. It is mostly held in his own farm and the district authorities and the Farm Radio Officer render all assistance to make the programme a success. Though the active participants in such symposia will be about half a dozen farmers, the rest of the community has a sense of participation even by attending such seminars. The entire recording which might run to about an hour or so is brought back to the studios and suitably edited and broadcast in one or more programmes. The enthusiasm of the farmers has been so great that the farmer who takes the initiative even provides lunch and tea for the entire group at his own cost, if he can afford it.

Stations like Jullundur and Vijayawada have started special programmes for the farm youth. The Jullundur station has started a ten-minutes daily, mid-day agricultural service which deals with improved practices in agriculture. A particular crop is taken and on each day of the week a particular aspect of its production is tackled. There has been much enthusiasm among young farmers in this programme.

The Indian Institute of Mass Communication conducted a national survey of communication sources in the adoption processes of High Yielding Varieties Crops in 33 villages from all over India situated in 30 High Yielding Varieties Programme districts. Analysis of the data led to the following tentative findings regarding the effectiveness of All India Radio's Farm and Home Programme;

1. Among the mass media, Radio was the most desired source of contact to get more agro-information.

2. Radio was the first source of agro-information of the High Yielding Varieties for one among every 5 farmers in the Farm and Home cell areas; whereas radio was the first source for one among every ten farmers in the areas not covered by the broadcasts of Farm and Home Cells of All India Radio.

Family Planning :

Discussing mass communication support for family planning programmes, Donald J. Bogue of the University of Chicago has

outlined six principal objectives; to inform, to promote private informal discussions, to legitimize, to neutralise rumours, to motivate and to announce Family Planning Services. As in the case of Agriculture, Radio can be used to let the people know that there are reliable methods of family planning, that they are harmless, inexpensive and within their reach. As in Agriculture, the radio can create "awareness" and kindle "interest". At the "evaluation" stage, discussions have to be at two levels—man and wife level and the group level. In conditions of domestic listening, Radio has to carefully devise programmes which could help exchange of views between man and wife. Studies by Reuben Hill and his collaborators, have shown the powerful impact of discussions between man and wife upon the adoption of family planning methods. There is the fear that it is largely man's will that prevails and so a domestic dialogue between man and wife on family planning might help.

Group discussions, separately among men and women, help to clear doubts and fears. More than anything else commitments made in public, help to give social and community sanction to family planning. Leaders of opinion like Maulvis and priests making public pronouncements help to legitimize family planning. Although family planning is an intensely personal and emotionally complex matter impinging directly upon the realm of individual attitudes, opinions and beliefs, yet the individual will seldom adopt it unless such action is in conformity with group norms.

One of the most important roles of radio and TV in the family planning programme is its help to spread what Dr. Berelson calls "a sense of rightness, even righteousness about family planning practices". Radio and TV can play a vital role to *legitimize* and make the family planning idea both *familiar* and acceptable. Radio, and TV should help to establish an attitude 'climate', to enable field workers to operate successfully in the target areas.

Idle gossip and vicious rumours are potential dangers to the spread of family planning ideas. The effects of IUCD and to some extent vasectomy has given rise to some of the most fantastic rumours. Gossip groups in villages can play havoc unless their

energies are channelled for more fruitful activity. It is the job of radio to provide factual information as frequently as possible and scorch all rumours promptly.

Interviews with beneficiaries provide authenticity and give the people a sense of participation.

Regular announcements regarding location of clinics, holding of camps, hours of work, costs involved etc., are a valuable service that radio should undertake. Motivational broadcasts have to be persuasive as well as prescriptive. Radio dramas have proved to be very effective in exposing the futility of clinging to outmoded social customs like early marriages, preference for male children, extolling the qualities of a mother of many children etc. Family serials like the recent Taxi TNFP 120 have carried the small family norm unobstrusively. New radio stock characters have been introduced in the shape of a much worried man, burdened with a large family with the resultant irritations. The importance of doing special programmes on family planning in our service for women listeners can hardly be overemphasized. The question and answer session in this programme where a specialist answers queries has been well received. In India, right from the start we have drawn the line of distinction between population control as a national goal and family planning as an individual goal. It is too much to expect illiterate individuals to limit their families for a vague and distant national interest. It will be the role of the mass media to present the arguments in terms of the individual's own well being. The task before the family planning communicator resolves itself into equating and fusing the individual goal with the national goal.

Recently Walajabad was selected for a listening survey by our Listeners Research Unit to gauge the extent of listening to different family planning programmes. The sample size was 200 in the age group 16-30 drawn from the voters' list. Nearly 97% of the respondents had heard about family planning. Radio was one of the normal sources of information to 75% of respondents. The listening to various programmes on family planning varied from 1.4 to 20.7%. Light songs, Plays, stock character programmes and questions and answer programmes have logged higher

percentages of listening. The style of language used in Family Planning programmes is liked by more than 90% of respondents. Type of programmes preferred are plays, discussions, questions and answers, songs, interview with experts and talks in that order.

Functional Literacy :

One of the general conclusions of the World Conference of Ministers of Education on the Eradication of Illiteracy (Tehran 1965) states "Literacy teaching should be resolutely oriented towards development, and should be an integral part, not only of any national education plans but also of plans and projects for development in all sectors of national life". Literacy programmes should make the participants proficient in their skills. To be effective and permanent, literary training must include knowledge and *skills* related to the learner's occupation. It should be 'selective' in the sense that different groups should receive different programmes according to their avocations. The rice grower should learn how to grow his crop more efficiently and at the same time learn to read and write. He must be able to read the simple pamphlets, read instructions on his fertiliser bag, maintain simple accounts, etc, The Industrial worker, likewise, has to have material useful for improving his skills. Literacy for its own sake has no charm for the adult.

Mass Media, specially Radio and TV can help functional literacy by (1) *Motivational programmes*, broadcasts which will bring home to the illiterate listeners the great opportunities that are bypassing them due to their handicap.

(2) *Instruction* : Direct lessons in good reading, though this needs the help of the teacher at the listening/viewing end. Good intonation and pronunciation can be a great contribution of the media. Radio and TV can also teach the literacy teachers or the monitors and leaders of radio/TV listening/viewing groups. This will help to improve teaching standards. If the feed-back is efficient, the effects will be.

(3) *Continuing Information Support :* These would be programmes pertaining to better techniques of production be it Agriculture or Industry. Literacy programmes which do

not result improved techniques and a sense of achievement will not enthuse the learners. It is in the above context that with the assistance of UN Special Fund, India has launched a *Farmers Education and Functional Literacy Project.* Two International agencies, UNESCO and FAO and three Government of India ministries, viz., Food and Agriculture, Education and Information and Broadcasting are involved in this project. Functional literacy is an important component of this programme- as it is recognised that the adult farmer would evince greater interest in literacy if it comes to him as a part of the process of applying new techniques for improving his agricultural production. The farmer while receiving his literacy lesson is expected to prepare his own farm plan, maintain his accounts, and to write letters for obtaining credit, supplies etc. The radio rural forums already in operation or defunct in many areas are being revitalised and form the nucleus round which the classes are being held. All India Radio has, on its part set up special Farm & Home Units in many areas to provide a sustained service to feed these groups with information.

It is not possible in the limited space available in a paper of this kind to cover all the areas like Agriculture, Education, (School, University and out-of school), Health, Industry etc. I have been able to deal only with Agriculture, Family Planning and Functional literacy. I am also conscious that I have not touched any media other than radio,. although TV has for instance been with us nearly a decade.

Summing up the role of communication in promoting social and economic change it may be said that development is retarded if communication is slow and inefficient but there is also the danger that if communication gets too far ahead i.e., if people are motivated and enthused and the necessary 'inputs' are not made available it will create what Daniel Lerner calls "the Revolution of rising frustration". In other words we have to make communication play its proper part within a system. "Development viewed as a system calls for the use of systems analysis and an integrated programming approach in problem identification and in planning the various elements of the system and its related sub-systems...". These words of Dr. Adiseshiah have to be borne in mind by planners as well as communicators in viewing the whole problem of

national development. They should identify and allot specific roles to communication in the total scheme of development. If the media are to do more than add to frustration, they must be part of a programme of sustained development. I had the privilege of working as a resource person for UNESCO in the meeting on Broadcasting in the Service of Education and Development in Asia held in Bangkok in 1966 and played a small role in the drafting of a recommendation, which I consider very important in the Indian context, and I would like to end this paper quoting that recommendation :

"Broadcasting should be considered part of the country's basic facilities like harbours, roads, electricity for the provision of which funds are invested not only for immediate and identifiable results, but which are rightly believed to promote a long term increase in national productions. As with investment in education, broadcasting resources should be expected to yield results in the form of an informed, motivated and skilled people, leading to the increased availability of productive man power whether in urban or rural areas".

* * * *

In the discussion of the paper during the Seminar chaired by Dr. T. S. Venkataswami, Professor of Economics, Presidency College Madras, there was general agreement with the techniques of radio programming set forth in the paper as an instrument of economic development and social change. It is particularly important that the volume and speed of communication through the radio should be in tune with the volume and speed of reception of of the audience. In agriculture and family planning programmes there are dangers in concentrating exclusively on success stories and so engendering rising expectations which may encounter rising frustrations. To avoid this there should be a discussion of failures, obstacles and problems encountered in these programmes.

The radio has not addressed itself sufficiently to the objective of reducing social tensions. Direct attack against some of their causes, casteism, nepotism, corruption might engender resistance and produce negative results. A carefully tailored positive

approach which takes into account the attitudes of people and invites and encourages their participation in the needed social changes must be developed. The family planning programme through the radio faces several problems. It seems to evoke a negative reaction among the educated people. It does not sufficiently take into account the cultural mores of the community in regard to attitudes and discussions about sex. It is in danger of preaching to the converted and not affecting the groups which need its facilities.

A more general problem is that though the mass radio audience is illiterate, it is extremely intelligent and impressively knowledgeable in matters concerning agriculture and other rural occupations—Radio programmes must build on this accumulation of experience and readiness to change. Given the inaccessibility of the country, the inability to read the printed word of the majority of the people, and the insufficiency of extension workers, the radio in India is a major instructional infrastructure for the country's economic development. It has discharged the function with remarkable success.

There is need for studies on the economics of the radio from a double dimension. First radio is one instructional media within a system of education and instruction through various media and methods. Relative cost benefit models of this system and its sub-systems must be developed to serve as a guide for a rational distribution of the country's limited resources between the various educational methods and in order to obtain the optimum returns from them. A second problem would be to examine the economics and sociology of the organisational pattern of the radio service in the country. Should the organisation be monopolistic and if so an arm of the state or an autonomous corporation? Should there be a competetive organisation in this important area? Whatever the organisation, given the essential infrastructural nature of the radio in India there is a strong case for low priced receivers and cancellation of radio fees for those who do not come under the Income Tax Act of the country, which is over 90 per cent of its poor people.

INVESTMENT IN AGRICULTURE *

I propose to confine myself to a discussion of the spread of the investment habit among the weaker section of the agricultural sector. In this sector including its weaker section of small farmers, thanks to improved farm practices such as those obtaining in the high yielding variety as well as in rainfed areas, there is no problem about spreading the investment habit. There is a very serious problem in institutionalising investments in the sector.

I shall advance 5 propositions about spreading the investment habit among small farmers :

- — improving agricultural practices have spread the investment habit
- — the investment needs per acre decline with the size of the holding
- — the agricultural money lender is the main source of credit and investment for the small farmer
- — it is not high interest rates which are preventing the spread of the investment habit but the lack of institutionalisation of investment sources
- — such institutionalisation involves the creation of new and regeneration of existing, governmental, co-operative and nationalised bank activities.

Improving Agricultural Practices-the Basis for Spreading Investment.

Pulling together the evidences from the All India Rural Credit Review Report, the 1961 and 1971 census, the Tagore lecture of A. Mitra and two case studies made in Tamil Nadu, I find that we should distinguish between the investment habit of the very small farmer who is one who owns upto 2.49 acres and who constitutes 34.5 per cent of the cultivating households and the investment habit of the large farmer who constitutes 10 per cent of the farming households owning 40 per cent of the land. In this discussion

* Extracts from a paper by Dr. Malcolm S. Adiseshia for the Agricultural Credit Symposium in Coimbatore.

I shall confine myself to the small farmer, that is to 35 per cent of the total farming population. The small farmer invests as much per acre in seed, fertilizer, plant protection, manure and irrigation as a farmer with 5 acres and above and except in the case of paddy as the medium and large farmer. In irrigated paddy the small farmer covered more of his cropped area with nitrogenous fertilizers. He is applying in more and more holdings substantial quantities of nitrogenous, phosphatic and potassic chemicals, improved ploughings etc. And so my first conclusion is that we have in the agricultural sector a large population which has the ability to absorb increasing investments and make such investments pay.

The Investment Needs per Acre and Size of Holding.

What stands in the way of such increasing investments is both scarcity of credit but even more its non institutionalisation. In Tamil Nadu a random survey of five farmers each from four villages of one Panchayat Union from each of the Districts shows the following credit gap per acre—for very small farmers (upto 2.49 acres) Rs. 695, small and medium farmers (from 2.5 to 7.49 acres) Rs. 483, medium and large farmers (7.50 to 15 acres) Rs. 406 and large farmers (above 15 acres) Rs. 381. The investment needs are highest for the very small farmers and that they are the most starved. A further measure is how much credit is used for productive investment and how much for household expenditure. In the case of the very small farmer, 72 per cent of the borrowings is for household expenditures, whereas it is nil for the medium and large farmers. Another gauge of credit demand is seen in the doubling in the demand for co-operative credit in Maharashtra, its trebling in Assam and its increasing 8 fold in Tamil Nadu, Uttar Pradesh and Orissa. And so my second conclusion is that the investment needs per acre decline with size but that ,equally the larger the farmer the more he is likely to borrow for farm expenses and not family expenses.

The Agricultural Money lender and Agricultural Investment.

The problem in spreading the investment habit in the agricultural sector is the terms on which it is made available. Credit to the small farmer is available from sources — the government,

co-operatives, commercial banks, agricultural moneylenders, relatives, landlords, professional money lenders and traders and Commission Agents—the first four being the main sources and of decisive importance. Government sources are important in all States. The co-operative source is particularly important in Maharashtra and Gujarat. The agricultural money lender (the land lord or large farmer who also doubles as money lender to the small farmer) is the major source of credit first in Bihar and next in Tamil Nadu. The professional money lender, the trader and commission agent are important in Orissa, Madhya Pradesh, Rajasthan and Uttar Pradesh. In the Tamil Nadu survey it is seen that 64.48% of credit for the small farmer is from the agricultural money lender, while for the large farmer this is a nil source (naturally because he is the agricultural money lender) and he relies for 77.2% of his investment needs on the co-operative source. This shows how investments are controlled by the large farmer both through his greater propensity to save, and his hold over the co-operative societies. In fact credit has become for him a more effective and reliable instrument for regaining the little that he has lost through land reform. A large portion of the money that he borrows from the co-operative is immediately invested in commercial or industrial ventures at double or even higher rates of return to that charged by the co-operative. It is thus not suprising that his investment resources are expanding rapidly and are being used within a small narrow circle. Meenakshi Malya's study of small Farmers in Tamil Nadu records on interesting incident. He interviewed co-operative society presidents both on their understanding of the objectives of the society and their functions as Presidents. The main function emerged as one of protecting the society from getting a bad name through overdues. "That is the primary concern of the president", said one "Thus unless a member is a close relative of mine I will never entertain a loan application. I will thus be certain that none will swallow the co - operatives' money. My relatives also know this" My third conclusion is that the Agricultural (not professional) money lender is the main source of credit and investment in the agricultural sector.

Differential Interest Rates and Institutionalisation of Investment.

In this setting the controversy over differential rates of interest as a means of spreading the investment habit does not have much relevance to the small farmer community. For him neither the majoritv recommendation which, explaining the difficulties of charging differential rates would maintain the status quo nor the minority minute, recommending rates ranging from ½ to 12 per cent has much meaning. In Tamil Nadu, the small farmer is paying as interest 8 per cent on Government and Commercial Bank credit, 7 per cent on Co-operative Credit and 36 per cent on the agricultural money lender credit. Under these conditions it seems to me to be completely irrelevant to keep wasting our time in arguing over whether the commercial Bank should charge a lower than 8 percent rate of interest to the small farmer because he is what is called a priority sector. The fact that for 64.65 per cent of his credit he is prepared to pay an interest rate of 36 per cent means clearly that it is not the 8 per cent charged by the Commercial Bank that needs to be lowered for the 11.87 per cent of the credit he receives from them. What is needed is for the raties of investment sources to be reversed, for Commercial Banks to provide him with 60 per cent of his credit needs and the agricultural money lender the 10 per cent. In fact, curiously enough, a case can be made against lowering the Commercial Banks rate of interest charged to the small farmer. The Co-operative rate is 7 per cent, and this is not benefiting the small farmer but the large land holder. What our investigations show is that when the small farmer has been issued a co-operative loan, it is taken over by the large farmer who reissues it to him for subsistence purposes at higher rates. So every one's interest seems to be served—The small farmer who wants a loan for subsistence or social purposes which the co-operative cannot meet, and the large farmer who keeps his eye and hand on the investment and credit of the community. From this point of view, wherein investment opportunities of the small farmer at lower rates are turned into loans at higher rates by the large farmer, it may well be that the small farmer is protected by the government, commercial banks and co-operative societies charging him a higher rate, something between the 8 and the 36 per cent, which will deter the large farmer from getting hold of the credit. What is needed, however, is a much

larger volume of credit to meet his needs. My fourth conclusion is that it is not interest rates which are preventing the spread of investment habits in agriculture but the lack of adequate institutionalisation of investment sources—Government and Small Farmers Development Agency, Commercial Banks and Co-operatives.

Institutionalisation of Investment Sources.

There is in the agricultural area need for the rapid expansion and reorientation of the functioning of the three investment institutions—the Government and the Small Farmers Development Agency, the Co-operative Society and the Commercial Bank. The Government, particularly the Department of Agriculture is doing its best under existing conditions. The problem here is one of procedures and the lack of provision to promote the investment habit in the small farmer. In general the administrative machinery in the States is not geared to attend to the investment needs of the small farmer in view of the many sided and complex pressures on the local government representatives. While fulfilment of physical and financial targets for each block and district by their officers are a necessary and useful discipline, there should be machinery for close scrutiny as to how the funds are being disbursed and productively invested. There are exceptions. In Vellore the small farmers state that they prefer to deal with block offices instead of Land mortgage Banks to whom loan disbursements have been transferred. The Malya study refers to the view of the Joint Director of Agriculture of Tamil Nadu who emphasises the importance of a rolling fund to prevent distress sales by the small farmer. In this context the Small Farmers Development Agency can be a real break through in spreading the investment habit in agriculture. It can work through credit institutions both to ensure adequate loans to small farmers and build up a fund to cover the risks in such investments. It can also supervise the end use of credit so that the institutions supply the small farmer with services he cannot afford, such as digging wells, lift irrigation, tractor ploughing etc. As far as Co-operative Institutions are concerned, their current neglect of the small farmers' investment needs are, as I have pointed out earlier, due to economic groupings, caste or factional interests and a host of rationalisations

such as the alleged incapacity of the small farmer to repay loans, his lack of collateral, his narrow crop base etc. The Cooperative source is one essential investment institution of the small farmer. It should relax its rules for security, raise its ceiling and limit the role and membership of the large landholder and money lender through reliance on small credit panels on which they should not be represented. As far as Commercial Banks are concerned the spreading of the investment habit in farming will mean an accelerated rate of Bank branch expansion in areas where there are no Banks so that the small farmer has physical access to them. It also means a stepping up in the programme to mobilise savings and deposits so that there can be a larger investment base. And finally, contrary to the present trend it would mean earmarking a growing portion of its credit resources for the small farmer. I am not sure in my own mind whether to develop in these directions, the Commercial Banks should themselves engage in small farmer investment operations. If they do they will have to change rapidly and drastically their current attitudes of Bank-client relationship and procedures regarding security, margins, evaluation of assets and prospects etc. An alterative would be for them to work through other rural institutions, as the Small Farmers Development Agency does. On the basis of evidence to date and some rough computation of costs to the Commercial Banks of the two alternatives, I am inclined to the latter. For all these institutions there is need for training and adequate orientation of staff committed to the spread of the investment habit in a new, forthright and flexible way. My final conclusion is that the spreading of the investment habit for the weaker section of the agricultural sector involves strengthening of governmental rural institutions, particularly the Small Farmers Development Agency, reorienting the co-operative institutions and rethinking the role and functioning of nationalised banks.

The Basic Premises.

The five propositions that I have advanced to spread the investment habit in the agricultural sector rest upon two basic premises. The first is that while there is the urgent need to promote increased investment habits, an even more urgent need is to ensure that the existing and prospective investment resources

are available to those who need them in the hitherto neglected sectors. Otherwise we will be in the same position as we are to-day in witnessing the widening gap between Plan allocations and Plan expenditures. At a time when we are worrying at our limited investment resources and are planning and undertaking measures to mobilise increased resources through very heavy taxation, savings campaigns etc., we find simultaneously that we are unable to invest upto the hilt even our existing resources and so use the shortfall on unproductive and administrative expenses. Taking the recently released report on our nationalised Banks, we find that the rate of growth of deposits from July 1970 to May 1971 has been 17.9 per cent, while the Banks' loans to the neglected sectors increased only from 22. 19 per cent to 22.8 per cent, agriculture's share being 5 per cent. Their share of the total additional advances declined from 56 per cent last year to 40 per cent this year. Our investment habit is not reaching out adequately to the neglected sector. My second premise is that such reaching out of investment to the small farmer is not charity, but good business. In the agricultural sector, the small farmer is not an uneconomic unit but obtains returns on his investment comparable to that of the medium and large farmer. In meeting his investment needs with adequate investment resources, we will be earning the normal return and helping the weak, we will be eating our cake and keeping it, we will be contributing to social justice in economic development.

CORRESPONDENCE

Letter dated 27 August 1971 from Mr. T. Suryanarayana Rao, M.A., Head of the Department of Economics, Anwarul-Uloom College, Hyderabad.

Thank you very much for sending me the July monthly bulletin of the Madras Institute of Development Studies. I have passed it on to our group for common benefit. The resume of the summer workshop by Dr. Kurien is comprehensive as also interesting. Dr. Malcolm S. Adiseshiah's "Social Justice in Economic Development" is a very able exposition of the doctrine of socio-economic progress. The parable of the Fisherman is so nice that I read it again and again.

I am happy to inform you that the second meeting of our group was held on the 14th instant at the New Science College. I presented an outline of my research work and there was useful discussion on it. Mr. Nandedkar presided and besides myself Messrs. Venkateswara Rao, Seshagiri Rao and Narasimhulu attended the meeting. The note presented is enclosed herewith.

Recently I directed a survey of the small industry in the old city areas of Hyderabad and brought out a report. This was an assignment by the Andhra Pradesh Small Scale Industrial Development Corporation to the Planning Forum of our college (Anwarul-uloom) of which I am the adviser. The report is also sent to you by separate post.

We look forward to receiving the August issue of the Bulletin which may contain the new section "Correspondence" as mentioned in your letter.

* * * *

Indian Poverty—A Colonial Model

(Selective study of Pre-Independence Thinkers)

Research outline presented by T. S. Narayana Rao at the second meeting of the Researchers Group on 14—8—1971 :

1. Statement of the problem :

The present day Indian economic thinking suffers from two weaknesses. One, non-continuity and second, absence of the national idiom.

Indian Economists draw their inspiration from the Western thinkers—Adam Smith, Walras, Keynes or Galbraith. Any reference to the founding fathers of Indian Economics is conspicuous by its absence. Modern Indian Economic thinking started in the beginning of the century with Dadabhai Naoroji (1825—1917). Ranade (1842—1901), Wacha (1844—1937), Ramesh E. Dutt (1848—1909) and others. Without a thorough grasp of these writers and their times, any study of Indian economic thought is bound to be defective.

There is a more practical aspect of the question. Economists have to tackle the problems of their society. Development of the discipline itself is inseparably connected with the exercise in dealing with the ills of the community. In fact the progress of any science, is limited to its usefulness to its times. Only by such a sincere continuous and dynamic application can our discipline acquire the national idiom. Trying to fit foreign curves to Indian data will always look artificial and out of tune.

Hence a study is proposed to highlight the foundations of modern Indian economic thinking and help develop nativity and naturality to Indian economics.

2. Objectives :

The prime purposes of the study are :

First, to know the method employed by the selected economic thinkers in their analysis;

Second, to identify the nature and content of problems taken up by the authors;

Third, to study the reactions of these authors to economic thinking in the Western nations in their day; and finally to assess the importance of their writings both in the context of world economic thinking and of the Indian setting of today.

3. **Scope :**

Two authors have been selected for close and comparative study. (1) M. G. Ranade (1842—1941) and (2) V. G. Kale (1876—1946). The study will be limited to the economic aspect. It will of course consider the political and social issues in so far as they have economic bearing.

4. **Method :**

A study of all the works of the authors will be made. These include essays, books, and stray writings in journals, etc., as also reports submitted. Besides this a study of literature about the authors during their time and later will be made. A bibliography is prepared. Quantitative analysis will be attempted wherever possible. For the rest of it qualitative assessment will be made.

5. **A general reading of the authors leads one to the understanding that**

(a) The authors adopted historical and inductive methods and rejected the deductive method.

(b) The main thrust of their study was anti-colonialism.

(c) They examined several domestic issues on micro level and suggested concrete remedies, and

(d) They were idealistic in their Grand Design for Free India.

*   *   *   *

Extracts from the letter from,

Prof : S. Ramanathan, Tiruchirappalli.

Dated September 25, 1971.

It was good bringing together in the recently held Seminar at least four almost irreconcilable groups, each one highly suspicious of the others—the representatives of the Government, of the Public Sector Undertakings, of the Private Sector Industries and the Research Scholars.

It is my earnest hope that you would kindly see to it that the S.D.R.C., amongst other activities, is geared to conduct a six-months course on Research Methodology. In my opinion, it is imperative. I know nationally reputed Research *Specialists* who start writing research reports from the last Chapter, Conclusions and Recommendations/Suggestions. However painful it is to us, we have to face the reality situation that intellectual honesty and personal integrity are at a very low ebb amongst us.

* * * *

Extracts from a letter from,

Prof : Mr. K.S. Sonachalan, Tirunelveli District,

Dated September 22, 1971.

Apart from finance, a high order of priority has to be accorded to personnel for conducting the project and from my 25 years of experience (since Enquiry into Rural Indebtedness in Madras State [1945-46], Dr. B.V.N. Nayudu, Honorary Economist and myself Assistant Economist) there is ever growing difficulty in securing the right type of researchers. If they could be helped (as ICSSR has done recently) to utilise materials for supplication of theses toward Ph.D. or M.Litt., it would be very useful. For this both sponsors and universities should relax their rules and regulations. This they could do because applied research is also productive of useful tools needed for developing economies. This is a change indicated by the changing situation, One more point. I am sure you may know that the chair in Madras University was

called Professor of *Indian* Economics and Dr. P. J. Thomas, as soon as he occupied the chair in 1927, chose "Why Indian Economics?" as theme for his first ever address, which I had attended.

*   *   *   *

Letter from:

Prof: B. M. Thirunaranan, Madras,
Dated September 20, 1971.

May I request you to send me a copy of the list of 229 priority research themes noted during the recent seminar on Consumer/User Oriented Research? I would very much like to see if I can be of any use, as a geographer, in dealing with the locational aspects of the themes, wherever pertinent and likely to be helpful. I am sure the geography teachers in the Departments of the university and Presidency and Queen Mary's Colleges will be equally keen on rendering whatever service is possible from the geographical point of view. I plan to interest them in this as soon as I get a copy of the list.

*   *   *   *

Letter from:

Prof: V. Subramanian, Madras, reproduced from the Hindu,
Dated September 27, 1971.

Research Development Council.

A three-day seminar on "Consumer/User Oriented Research" organised at Madras last week by the Madras Institute of Development Studies in co-operation with the Indian Council of Social Sciences, made an important recommendation that the Tamil Nadu Planning Commission should establish and run a "State Research Development Council" in consultation with the universities, research institutions and laboratories. The Council should consist of the research specialists of the universities and their

affiliated colleges and institutions of higher learning, representatives of the development departments of the State Government and the private and public sector industrial undertakings.

The perspective planning which the State Planning Commission is now engaged in will need a number of specialised studies to be undertaken by specialist bodies for which necessary finance should also be made available. The State Research Development Council, if set up, may entrust these studies to various specialised organisations on a contract basis so that the universities, national laboratories and other institutions could be involved in the matter of providing the knowledge to the Planning Commission in drawing up the perspective plan to meet the socio-economic objectives of the Government. This will also enable the utilisation of undergraduates and post-graduates, who can also be given research assistantships. Indeed the universities and other institutions like the IIT should think of awarding post graduate degrees like M.Sc., Ph.D. treating their research in these studies as part of their qualification. It is hoped that the State Government will lose no time in setting up the council and allocate necessary finance for it.

Regd. No. M. 8831

MADRAS INSTITUTE
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— Exchange and dialogue at the State, National and International levels on development issues ;

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